# Florida Citrus Advanced Technology Program

## QUARTERLY & FINAL REPORTS: Control of Citrus Greening, Canker & Emerging Diseases of Citrus

**Instructions** Complete the fields based on your project specs. When finished, save the form to your local disk using a unique name. Then, go to **http://research.fcprac.com**, and log in with your user name and password using Researcher Login in the lower left. Find this project title and click on **Submit a Report**. Update your profile information if needed, then upload this report as directed.

| 2009-2010 REPORT | CATEGORY (drop-down) | TODAY'S DATE (m/d/yr) |
|---|---|---|
| (●) *Quarterly Report* ( ) *Annual Report* ( ) *Final* | HLB Pathology | 8/16/10 |

**WHAT IS THE "HEADLINE" FOR THIS REPORT (e.g. a one-sentence "newspaper headline" describing what you accomplished)**

Efforts to culture Candidatus Liberibacter asiaticus continue

**TITLE and CONTACT INFORMATION**

*Proposal Title* Culturing Liberibacter asiaticus

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|---|---|
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| *Email* mjdavis@ufl.edu | *FDACS Contract Number* 00077623 |
| *Phone* 863 956 1151 ext. 1295 | *Project Duration (years)* 1 *Year of Project* 1 |
| *Organization* UF/IFAS CREC | *Total Direct Funds (current year)* 65000 |

**REPORT UPDATE (650 words; provide details about your headline)**

We have been able to detect Candidatus Liberibacter asiaticus (LAS) in biofilms on the surface of alimentary canals of psyllids (Diaphorina citri) reared on citrus infected with huanglongbing in insectaries or collected from citrus groves with a history of having huanglongbing. The alimentary canals were dissected from psyllids, suspended in a buffered dye solution on microscope slides, and LAS was observed on the canals using epifluorescence microscopy. The DNA-binding fluorochrome, Syto 13, was used as the dye. The percentage of psyllids from which LAS could be detected in this manner varied from about 0 to 30%. The percentage was consistently less in July and August than it was earlier in the year. Thus, it has become more difficult to find enough psyllids carrying LAS for use as a source of inoculum to test different media for their ability to support growth of LAS. To help overcome this limitation, we have been washing individual alimentary canals with medium, examining a sample of this medium for LAS, and using those suspensions containing LAS as inoculum. We have been able to detect LAS cells in inoculated media by epifluoresence microscopy. By counting LAS cells, we should be able to detect changes in population size that might indicate growth of LAS in the media. Although we have not detected definite growth of LAS in any medium formulation as of yet, some formulations appear to support detectable levels of the bacterium for several weeks after inoculation while other formulations do not.