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*	Genetics	11/18/09

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

The cloning of phloem-specific promoters and resistance proteins has been initiated for eventual transfer to citrus.

TITLE and CONTACT INFORMATION

Proposal Title Engineering citrus for resistance to Liberibacter and other phloem pathogens

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Phone (352) 392-1568	*Project Duration (years)* 3 *Year of Project* 1
Organization University of Florida	*Total Direct Funds (current year)* $112,894

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

Four phloem-specific promoter constructs have been cloned into the pCAMBIA plant transformation vectors. These are -940 and -690 5'-deletions of the Arabidopsis SUC2 promoter driving expression of GUS and GFP reporters. These are will be transformed into Arabidopsis to confirm phloem-specific expression. In parallel, these two constructs of the AtSUC2 promoter will also be used to drive expression of a series of resistance proteins (R-proteins) that have been shown to provide disease resistance when either over-expressed as wild type proteins or expressed as activation mutants. The R-proteins that are being cloned for phloem expression include the following: AtSSI4, and AtSNC1. The AtSSI4 and AtSNC1 proteins will be expressed both in the wild type and mutated forms. The others will be over-expressed in their wild type form.