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	10/9/09

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

Grafted plants ready to be challenged with HLB

TITLE and CONTACT INFORMATION

Proposal Title Evaluate Differences in Response to HLB by Scions on Different Rootstocks

Principal Investigator Gloria A Moore	*PI Last Name* Moore
Email gamoore@ufl.edu	*FDACS Contract Number* NAS143
Phone 352.392.4711x221	*Project Duration (years)* 3 *Year of Project* 2
Organization University of Florida	*Total Direct Funds (current year)* $55,000

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

We have propagated by cuttings the following 'Carrizo' citrange AtNPR1 transgenic lines: 854, 857, 859 and 884. Lines 854 and 857 show high overexpression of the endogenous marker gene PR1 (considered a marker of SAR). Lines 859 and 884 do not express the AtNPR1 transgenic gene and do not show overexpression of the endogenous PR1 gene, hence are considered as negative controls. Subsequently we have grafted a number of these plants with wild type (WT) 'Duncan' grapefruit. We also grafted WT 'Carrizo' plants with 'Duncan' grapefruit as controls. We have also treated the plants with either salicylic acid (SA) or water (as negative control) and are in the process of comparing their response using TaqMan Real Time PCR. In preparation for the real time experiments we have also sequenced a number of genes of interests (NPR1, NPR3 and PR1) from both 'Carrizo' and 'Duncan' to guaranteed that the target probe/primer sequences within the genes are identical and that any observed differences in expression are not due to differential efficiency in annealing of the probes and/or amplification. We have also standardized the real time reaction for the marker PR1 gene and continue to do so for the rest of the genes. This will allow us to analyze the response of the plants as proposed in objective one. The same group of plants will subsequently be analyzed as proposed in objectives 2 and 3. For this purpose we have also been propagating HLB-infected material and have standardized the real time PCR detection of the pathogen so we are confident we can conduct the proposed experiments.