CITRUS ADVANCED TECHNOLOGY PROGRAM

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

▶ INSTRUCTIONS

(●) *Quarterly Report* ( ) *Annual Report* ( ) *Final*

Required: What is the "headline" for this report (e.g. a one-sentence "newspaper headline" describing what you accomplished)

Partial characterization of Liberibacter in seed coats

Proposal Title

Analysis of the colonization of citrus seed coats by 'Candidatus Liberibacter asiaticus' the causal agent of citrus huanglongbing and their use as a concentrated, pure source of bacteria for research.

Today's Date	Sponsoring Organization (drop-down)	Category (drop down)
10/21/11	Citrus Research and Development Foundation	Culture, Molecular Biology, Koch's Postulates

REPORT UPDATE (500 words; summarize your accomplishments)

This research agreement became effective 1-Jun-11. Funds were provided in the grant for hiring a GS5-7 biological support technician as an ARS employee. The recruitment agreement was drawn up, applicant names have been provided to the PI by ARS Human Resources and candidates for interviews have been selected. Preliminary results of foliar and seed coat tissue fractionation and filtration experiments were obtained both before and after the effective date of the Research Agreement. Analysis suggests that Liberibacter cells reside in a matrix within the phloem sieve elements and that a large portion of this matrix is composed of bacterial DNA. Results from microscopy with Fluorescence In Situ Hybridization (FISH) indicated that individual bacteria or clumps of bacteria could be liberated by mechanical pulverization of source tissues, but numbers of cells were less than expected based on real time PCR (qPCR) data, and cell morphology appeared to be altered. Experiments are continuing to generate additional data.

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Organization USDA-ARS-USHRL

Contract Number 11-22-418

Project Duration (years) 2 *Year of Project* 1

Total Funds (current year) $89,650.00

SUBMIT REPORT

CITRUS RESEARCH AND DEVELOPMENT FOUNDATION, INC.