CITRUS ADVANCED TECHNOLOGY PROGRAM

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

SELECT PERIOD March 2015

(●) *Quarterly Report* ( ) *Final*

Proposal Title

Development of Technologies Important for Creation and Commercialization of Transgenic HLB Resistant Citrus

Today's Date	Sponsoring Organization (drop-down)	Category (drop down)
9/30/14	Citrus Research and Development Foundation	Transgenic/Metagenomic Mediation of Resistance

REPORT UPDATE (500 words-It is not necessary in this public report to disclose your institution's proprietary information or intellectual property.)

The main accomplishments during this quarter:

1) We improved a sterilization technique used for greenhouse-grown mature/adult shoot tissues and the contamination problems have been significantly reduced.

2) We have infected mature/adult tissues of Valencia and Washington orange using our transformation enhancing genes (K and I genes). Our preliminary results show that the use of the K and I genes we developed lead to drastic increases in transformation efficiency of mature tissues when compared to the conventional Ti-plasmid vector containing no K or I gene.

3) We have observed that the transport of an endogenous plant hormone in explants plays an important role in shoot regeneration efficiency. We also observed that manipulating the transport of that hormone improves shoot regeneration and genetic transformation efficiency of juvenile citrus explants. We are currently testing the effects of the same manipulation on adult tissues of citrus. We hope that manipulation can further enhance transformation efficiency of adult citrus tissues.

4) We are writing one manuscript that reports the drastic enhancement of citrus transformation efficiency of juvenile tissues of citrus. We will work on the second one, the effects of the transport and its manipulation for an endogenous plant hormones in explant tissues, once the first one is submitted.

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Organization University of Connecticut

Project Number 749

Project Duration (years) 2 *Year of Project* 3

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Form PR-12 Quarterly Reports **SUBMIT REPORT**

CITRUS RESEARCH AND DEVELOPMENT FOUNDATION, INC.