CITRUS ADVANCED TECHNOLOGY PROGRAM

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

SELECT PERIOD June 2016

(●) *Quarterly Report* ( ) *Final*

Proposal Title

A multi-omics approach toward the culturing of Liberibacter asiaticus

Today's Date	Sponsoring Organization (drop-down)	Category (drop down)
02/20/2017	Citrus Research and Development Foundation	CLas culture, genomics, molecular biology, and Koch's

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

A paper was submitted during this period (Cruz-Munoz M, Cohn A, Lai K.-K, Dia, R, Rusoff K, Conrad R, Triplett EW 2016. A chemically defined medium suggests α-ketoglutarate and malate as primary carbon sources for Liberibacter crescens BT-1 growth. Submitted to Applied Microbiology). We continued to improve the defined medium for L. crescens and now use a medium called M12. In addition, we obtained more phloem metabolomics data from Nabil Killiny which was used to create more media formations for CLas. We have also learned that the typical primers used to assess CLas growth in culture give misleading results because they were created to amplify the bacteriophage sequence and not those of the bacterial genome. A new set of primers was designed that sigificatly improve our ability to assess growth. .
The metabolomics data for the culture of L. crescens in defined and undefined media are encouraging. The strain grows much faster in BM-7 than in M11n so we are identifying those components that are limiting for growth in the defined medium (M11n). When identified, their concentration will be increased in the CLas medium. We have had difficulty maintaining an infected psyllid colony in Gainesville which has prevented us from studying the heterogeneity of CLas strains

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

CITRUS RESEARCH AND DEVELOPMENT FOUNDATION, INC.