CITRUS ADVANCED TECHNOLOGY PROGRAM

QUARTERLY & FINAL PROGRESS REPORT FORM: Control of Citrus Greening, Canker & Emerging Diseases of Citrus

▶**PROJECT QUARTER END** February 2023 ◉ *Quarterly Report* ○ *Final*

Proposal Title

Vismax(R):A novel peptide-based therapeutic for mitigation of citrus diseases, including HLB

Today's Date	Sponsoring Organization (drop-down)	Category (drop down)
03/14/2023	Citrus Research and Development Foundation	Other

ABSTRACT (Executive Summary-public report-do not disclose proprietary information or intellectual property)

1. Please state project objectives and what work was done this quarter to address them:

Objective: Determine whether Vismax treatment promotes resistance to other [than HLB] major citrus diseases, specifically *Phytophthora* root rot and citrus canker. Demonstrate that Vismax treatment of greenhouse-inoculated trees reduces disease severity and/or incidence.

Work: Dr. Megan Dewdney (U. Florida IFAS CREC) conducted an inoculated *Phytophthora* root rot greenhouse cone-tainer trial was conducted late Q4 2022 into Q1 2023, evaluating rates of drench-applied Vismax in combination with and comparison to Foliar-applied Vismax for their ability to promote resistance to phytophthora root rot in susceptible orange seedlings by comparing dry structural and fibrous root masses, scoring roots and foliage for visible evidence of *Phytophthora* infection, and measuring *Phytophthora* incidence at root tips.

2. Please state what work is anticipated for next quarter:

In Q2 2023, with Dr. Dewdney, we plan to execute an additional *Phytophthora* Root Rot Trial, to expand on the results of the study conducted on the Q4 2022-Q1 2023 trial (described above) with a rhizotron trial. The rhizotron trial is a more detailed and labor-intensive trial that enables root observaton throughout the duration of the trial, giving more detailed data about the timing and level of protection provided throughout disease progression.

Additionally, with Dr. Dewdney, we will execute a citrus canker trial, this time focusing on the effect of differential application timings and application method combinations (e.g. root drench + foliar). The number and severity of lesions will be scored and imaged for this trial.

3. Please state budget status (underspend or overspend, and why):

The project is currently under budget, due to the seasonality of greenhouse disease trials and availability of "clean", uninfected seedlings for trials. To date, we have used 50% of the allocated funds. The continuity of collaborator in the past year has allowed us to plan farther in advance, and enable our collaborator to plan more experiments to a tighter timeline. This will enable to us to progress the project at a faster rate in Year 3 and complete objectives for assessing Vismax efficacy for control of citrus canker and *Phytophthora* root rot.

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Sponsor Project Number 20-015

Project Duration (years) 2.5 *Year of Project* 3

% Completion of Objectives (FDACS requirement) 65.00%

CITRUS RESEARCH AND DEVELOPMENT FOUNDATION, INC.