

**CITRUS RESEARCH AND DEVELOPMENT FOUNDATION, INC.**

**Minutes of the**

**Commercial Product Delivery Committee Meeting**

**Thursday, May 14, 2020**

A teleconference meeting of the Commercial Product Delivery Committee of the Citrus Research and Development Foundation, Inc. was held on Thursday, May 14, 2020. The meeting was properly noticed and recorded. The meeting was called to order at 1:01 p.m. by Chairman John Updike, Jr. Roll was called, and a quorum was present. Committee members participating were Larry Black, Alex Brown, Holly Chamberlain, Tim Eyrich, Kelly Friend, Greg Hodges, Jeanna Mastrodicasa, Brian Scully, Shannon Shepp, Josh Snively, and John Updike. Also participating were Rick Dantzler, Steve Futch, Jim Graham, David Howard, Audrey Nowicki, Pat Ouimet, Brandon Page, Jim Syvertsen, and Deidra Whatley.

Also present were Ute Albrecht, Johanna Bailey, Bobby Barben, Teodoro Berloco, Ken Brown, Scott Crowder, Margaret Dantzler, Vasilios Fotopoulos, Hugh Frith, Nekatarios F., David Gerrard, Piotr Gulczynski, Zuzia G., Jack Kilgore, Jeff Krammeyer, Yianni Lagos, Michelle Leslie, Tom Malvar, Tom Minter, Michel Saline, Stacie Schumer, Ahron Seeman, Joby Sherrod, Sarah Strauss, Peter Szeremeta, Brian Thompson, Umberto Torresan, Eric Triplett, Rob Veling, Rosa Walsh, Billy Williams, and Cristos Xilosyannis. Other callers were present on the line who did not identify themselves.

Mr. Black moved to accept the minutes of the December 2, 2019 CPDC meeting. The motion was seconded by Ms. Shepp and, with no discussion, passed unanimously.

Mr. Updike turned the floor over to Mr. Dantzler to discuss committee members' term limits which had expired at the end of June 2019, and term limits of committees coming up for renewal June 30, 2020. Mr. Dantzler stated that Ms. Holly Chamberlain, Dr. Pat Ouimet, Dr. Brian Scully, and Ms. Shannon Shepp were the committee members whose terms have expired; each had been contacted and Ms. Chamberlain, Dr. Scully, and Ms. Shepp had agreed to serve another term. Dr. Ouimet has stepped down from the Committee due to her commitment to chairing the Research Management Committee.

Mr. Dantzler noted that two members had resigned from the Committee prior to the end of their terms: Mr. Tom Stopyra because of an out of country relocation, and Dr. Alec Hayes due to his resignation with Coca-Cola. Mr. Alex Brown, President/CEO of Indrio Brands, has been asked to fill Mr. Stopyra's position on the committee, and Mr. Josh Snively, President of Archer Daniels Midland and CRDF Board of Directors member, has been asked to fill Dr. Hayes' opening. Both gave a brief bio and their experience in the citrus industry. There being no discussion or alternate nominees, Ms. Chamberlain made a motion to recommend Mr. Brown and Mr. Snively to the Commercial Product Delivery Committee. The motion was seconded by Mr. Eyrich and, with no discussion, passed unanimously.

Mr. Updike asked Mr. Dantzler to discuss the University's Transformation Lab Oversight Committee's Response to CRDF. Mr. Dantzler gave a history of CRDF's funding of the transformation labs, and what led to the formation of the Oversight Committee by the University.

In December 2019, after the University's response to the report by the expert review panel which was brought in by CRDF to evaluate the Transformation labs, the Board approved funding for the labs for one more year. It was stipulated that future funding would be heavily dependent on how the University acted on the panel's recommendations and asked that the University report back to CRDF by March 31, 2020, on actions taken.

Mr. Dantzler stated that he felt the University presented an excellent response to the recommendations. One example was the integration of an overall manager of the two labs; the University has since asked Dr. Manjul Dutt to supervise both the mature and immature tissue transformation labs. Another suggestion was the creation of the Oversight Committee, which has met twice, and is currently developing a business model for the labs to become financially self-sustaining achieve within the next five years. Mr. Dantzler then went into greater detail as to how they would achieve this goal. Mr. Updike suggested that Mr. Dantzler make a request of the University's Oversight Committee that a second report be provided by October 31, 2020 on additional progress made.

Mr. Eyrich brought up for discussion the marker genes they were using in the labs and how it could not be used for commercialization due to GMO standards. Mr. Dantzler stated that the matter has been discussed. Mr. Eyrich then offered his assistance to coordinate a visit with Tim Hutton at the EPA and with the regulatory standpoints.

The next matter on the agenda was an update on the Bayer/CAPS proposal. Mr. Dantzler gave a summary of the last few years of CRDF's involvement with the Bayer project, i.e. the project's objectives and success to date, co-funding partnerships, and CRDF's funding end date of June 30, 2020. The co-funding partners - CRDF, Coca-Cola, Pepsico-with the addition of the California Citrus Research Board, have agreed to contribute equal funding for an additional six months through December 31, 2020. The additional six-months of funding would allow the partners to apply for a federal NIFA grant with the goal of the federal government funding the next stage of the project. If the grant application is not successful, the funders will have to decide if they wish to continue with the project after December 31, 2020. There being no questions regarding the CAPS proposal or the Bayer project, Mr. Updike moved forward with the agenda.

CRDF had been presented an off-cycle project by Soilcea. CRDF had previously funded Dr. Wang's genetic research, and through Dr. Wang's work an effector protein, the SD-15, was discovered to have positive effects on the symptoms of HLB. Soilcea then acquired the licensure rights to all the genes having to do with SD-15. Soilcea has identified five genes that have the highest effect on HLB. This project will focus on all five.

The off-cycle proposal was presented to three members of the Scientific Advisory Board, reviewed individually, and then the SAB met via teleconference to discuss collectively with Mr. Dantzler and

Dr. Graham. While the SAB members were impressed with the science, they felt the project was pricey and questioned why the transformation labs at the University weren't being utilized for some of the work.

Mr. Dantzler went on to explain how the project would be broken into Phases and what each phase hoped to accomplish. He mentioned that Soilcea had sought funding from the California Research Board but had been denied and explained the reasons why. There were then discussions regarding EPA regulatory matters with no definitive answer as to when or how they would be resolved. With no further questions or discussion, Chairman Updike asked if anyone wanted to make a motion. Hearing none, the off-cycle proposal from Soilcea failed to advance for lack of motion.

**Researcher Presentation:** Dr. Eric Triplett gave a presentation of his CRDF-funded Project 16-009, "Developing second generation antimicrobial treatments for the control of citrus greening disease," which terminated in June, 2019, and his currently-funded CRDF Project 18-024, "Foliar phosphate fertilization: a simple, inexpensive, and unregulated approach to control HLB".

**Special Presentations:** Brian Thompson, CEO of Elemental Enzymes, gave a presentation on the company's foliar spray and trunk injection methods of turning on immune factors of the plant using proprietary peptides. Elemental Enzymes has been in contact with Mike Aerts for regulation discussions of Section 3, and Dr. Evan Johnson to begin collaborations on below-ground disease testing.

Umberto Torresan and Tom Malvar with Invaio Sciences made a presentation to the Committee on its (patent pending) minimally invasive trunk injection device, which aims to provide a more targeted exposure of materials to the tree tissue. They outlined the development of the product from proof of concept through commercialization.

Vasilios Fotopoulos and Fredo, representatives from CitruSaver presented on their fertilizer product, which can be applied through plants' irrigation source. The fertilizer has been tested on a variety of citrus in Florida as well as olive trees in Europe.

Mr. Brandon Page presented information on proposed new rootstock trials, to be conducted by CRDF, focusing on processed fruit varieties, including the plant material selection process, the trial design, data to be evaluated in the trials, and who would be collecting the data from the trials.

Due to further outbreak of the Lebbeck mealybug, Mr. Updike reported that Dr. Lauren Diepenbrock has requested research funding. She has been asked to submit an off-cycle proposal.

With no further discussion the meeting was adjourned at 3:42 p.m.

Minutes submitted by Deidra Whatley