

CITRUS RESEARCH AND DEVELOPMENT FOUNDATION, INC.

Commercial Product Delivery Committee

Meeting Minutes

July 1, 2014

A meeting of the Commercial Product Delivery Committee of the Citrus Research and Development Foundation, Inc. was held on Tuesday, July 1, 2014. The meeting was properly noticed and recorded. The meeting was called to order by Chairman Ben McLean at 9:35 a.m. Roll was called and a quorum was present. Committee members participating were: Mr. Joe L. Davis, Jr.; Mr. David Howard; Mr. Ricke Kress; Mr. Peter McClure; Mr. Ben McLean; Mr. Jerry Newlin; Ms. Shannon Shepp; and Mr. Tom Stopyra. Dr. Mary Duryea and Mr. Hugh Thompson were on the line but unable to participate by telephone due to problems with the conference call service. Committee members Dr. Timothy L. Anglea; Mr. Larry Black; Mr. Peter McClure; and Mr. Andy Rackley did not participate.

Other participants in the meeting were Mr. Mike Aerts; Mr. Gary Anderson; Dr. Calvin Arnold; Mr. Bobby Barben; Mr. Daniel A. Botts; Dr. Harold Browning; Mr. Dan Casper; Dr. Lisa Conti; Dr. Jim Dukowitz; Mr. Steven Dwinell; Dr. Jim Graham; Dr. David G. Hall; Mr. Greg Hodges; Mr. Tom Jerkins; Ms. Diane Johnson; Dr. Evan Johnson; Mr. Mark Lajeunesse; Ms. Susan Mardenborough; Mr. Roy Morris; Ms. Audrey Nowicki; Mr. Brandon Page; Mr. Jay Pearson; Mr. Mike Sparks; Mr. Mike Stewart; Mr. John Strang; Dr. Xiaoan Sun; Dr. Tom Turpen; and Mr. Tim Wood.

Mr. Kress moved to accept the minutes of the May 27, 2014 meeting. The motion was seconded by Mr. Howard and passed unanimously.

Chairman McLean asked Dr. Turpen to report on active projects including graft assays, screening, and *liberibacter crescens* assay, in efforts to identify the most effective microbial compounds. He has been reaching out to commercial providers for compounds that can be tested in a 2-week flush assay, followed by more in-depth assay studies using injection to approximate field dose. He also reviewed the lists of tetracycline compounds being evaluated by Dr. Triplett's lab under the agreement with CRDF. He responded to questions stating it would take seven months to determine the correct dosage using this assay.

Dr. Stover presented an overview of Dr. Shatter's project funded under an SCRI grant, reviewing the advantages of basal bark delivery with effective penetrants to deliver antimicrobial materials. The results of various field trials were shared, including combined applications of penicillin + oxy-tetracycline and evaluation to determine effectiveness against HLB. These early trials will lead to improved information to plan the series of field evaluations of antimicrobial candidates being supported by CRDF. Mr. Hodges reported on current studies taking place at the FDACS Citrus Arboretum in Winter Haven, to keep the collection of citrus germplasm trees healthy in the presence of HLB. A handout was provided to summarize recent discussions with EPA's Office of Pesticides regarding the registration of antibiotics for use in Florida citrus.

Dr. Graham reported on root health research relating HLB infection to root decline, and offered that additional efforts in the greenhouse could be accomplished with support for a graduate student. Mr. Newlin commented that this work is important in the short-term and voiced his support. It was recommended that Dr. Graham consider requesting outside consulting help, possibly Syngenta, as well as a recommendation by Dr. Burns of a workshop for brainstorming what could be an important short-term bridging to bactericides. There was general consensus that the next step for Dr. Graham would be to present a written work plan and budget for Research Management Committee consideration and recommendation to the Board for approval. Additional discussion by Mr. Newlin indicated that research with mulch at SWFREC, Immokalee also should be considered for additional support, as it also relates to root health.

Dr. Browning reported on the status of the four AgroSource contracts; several issues have been resolved and the few that remain are being negotiated. A meeting of the Executive Committee will be called for final approval of the contracts once resolved.

Dr. Browning presented three projects for approval:

- 1) Dr. Triplett's assay extension for one year with no additional funding commitment, since the previous amount approved has not yet been met. Mr. Davis moved to recommend the Board approve extending Dr. Triplett's Research Service Agreement for one year; seconded by Mr. Newlin, the motion passed.
- 2) Dr. Claudio Gonzalez's assay was funded part way through the year and required additional time to complete. Mr. Kress moved to recommend the Board approve extending Dr. Gonzalez's Research Service Agreement for one year to allow for completion. Seconded by Mr. Howard, the motion passed.
- 3) The antimicrobial assay proposed by Dr. Wang as outlined in the meeting materials is recommended for evaluating candidates in field trees. The proposal supports up to forty candidates over the next twelve months at a rate of \$2,200 per candidate, with a total of up to \$88,000 for this year. Mr. Davis moved to recommend the Board approve Dr. Wang's assay proposal for \$88,000 as presented. Seconded by Mr. Newlin, the motion passed.

Mr. Stopyra made a presentation regarding Commercial Product Delivery areas not under contract at present and encouraged the committee to develop a management strategy to get all of these important topics underway.

Dr. Browning updated the committee on the MAC funding activity, including pending projects:

- 1) Part one is to use a CHMA concept to control abandoned groves. This involves going into an area and removing the highest ranking risk inoculum.
- 2) Funding of the third AgroSource project, ten field trials with associated greenhouse studies to evaluate the efficacy of streptomycin and oxy-tetracycline against HLB.

- 3) Funding to cover part of the field evaluation costs for thermal therapy scale-up. CRDF will host this project to evaluate the results of field treatment with thermal therapy. This effort will augment the MAC project to encourage scale-up. The first MAC-funded contract has just been received and is being reviewed. This project supports antimicrobial field evaluations.

Dr. Turpen presented a plan to implement greater Commercial Product Delivery Management of Antimicrobial projects, proposing the addition of a full time member to the TIG team as the Florida antimicrobial Project Manager. This additional project management effort in Florida was recommended by the committee and Board. Mr. Kress suggested that since the initial directive to hire this individual from Florida to handle the antibacterial management came from the Governance Committee they should be consulted with regard to this request. Further discussion led to recommendation that the COO prepare recommendations for presentation to the Board of Directors meeting.

Dr. Turpen reported that he extended Dr. Bernard Gabonay's assignment another month to find antimicrobials that have been evaluated for health use but are not being used so they can be evaluated for efficacy against HLB. He also reported that Stanford University raised issues with the CRDF contract for the approved CATP13 proposal submitted by Dr. Sharon Long which resulted in Stanford agreeing to put all of the work under this project in the public domain.

Mr. McLean introduced Mr. Marc Lajeunesse, Agro Research International, who is introducing a thyme oil product, Thyme Guard, active against a wide array of bacteria. The company would like to see some trials in Florida to validate what has been learned in Brazil. As a 25(b) Minimum Risk Pesticide, the product is exempt from tolerances and EPA registration, and he is expecting approval of a Florida label from FDACS soon. As a 25(b) Minimum Risk Pesticide, the product is exempt from tolerances and EPA registration, and he is expecting approval of a Florida label from FDACS soon.

With no further business, the meeting was adjourned at 1:40 p.m.

Minutes submitted by Audrey Nowicki