

RMC-2018

RMC-2018 Full Proposal Invitations			
Proposal No.	Investigator	Organization	Title
18-001	Ampatzidis, Yiannis	University of Florida	Development of early detection technologies for citrus black spot for effective management in groves
18-002	Batuman, Ozgur	University of Florida	Development of an automated bactericide delivery device, and assessment of distribution and movement of bactericides in citrus
18-003	Boltz, Kara	Soil Culture Solutions, LLC (d/b/a Soilcea)	Field trial testing for HLB and canker-resistant citrus trees created using CRISPR-Cas9 gene editing
18-004	Bowman, Kim D.	USDA	Development of SuperSour and other outstanding rootstocks with tolerance to HLB
18-005	Cano, Lillian M.	University of Florida	Resistance enhancement to Candidatus Liberibacter asiaticus via transgenic citrus with heterologous expression of plant disease resistance (R) genes.
18-006	Dewdney, M.M.	University of Florida	Understanding the underlying biology of citrus black spot for improved disease management
18-007	Dutt, Manjul	University of Florida	Investigating the role of transgenic rootstock-mediated protection of non-transgenic scion.
18-008	Gerasimova, Yulia	University of Central Florida	Novel molecular tools for detection and monitoring of bactericide performance in HLB affected citrus tree
18-009	Gesquiere, Andre	University of Central Florida	Tracking Antibiotics in Phloem Tissue Using Advanced Fluorescence Tools
18-010	Gmitter, Fred	University of Florida	Upgrading Citrus Genome Sequence Resources: Providing the Most Complete Tools Necessary for Genome Editing Strategies to Create HLB Resistant Cultivars
18-011	Gmitter, Fred	University of Florida	Part A - The UF/CREC Core Citrus Improvement Program (Complementary to Part B - The UF/CREC Citrus Improvement Program's Field Trial Evaluations)

18-012	He, Zhenli	University of Florida	Smart nanotechnology to improve the efficacy of bactericides in mitigating CLAs and increase fruit yield/quality and sustainable production of HLB-affected citrus groves
18-013	Jones, Jeffrey B.	University of Florida	Using a Multipronged Approach to Engineer Citrus for Canker Resistance
18-014	Killiny, Nabil	University of Florida	Introducing advanced laser technology to deliver bactericides in Florida citrus to mitigate Huanglongbing
18-015	Li, Yi	University of Connecticut	Engineering rootstock with CKX and DET genes to improve its tolerance to biotic and abiotic stresses
18-016	McNellis, Tim	Penn State University	Testing grapefruit trees expressing an anti-NodT antibody for resistance to HLB
18-017	Mou, Zhonglin	University of Florida	Establish early-stage field trials for new HLB-tolerant canker-resistant transgenic scions
18-018	Pelz-Stelinski, Kirsten	University of Florida	Disrupting transmission of <i>Candidatus Liberibacter asiaticus</i> with antimicrobial therapy
18-019	Rogers, Elizabeth E.	USDA	Phloem specific responses to CLAs for the identification of novel HLB Resistance Genes
18-020	Santra, Swadeshmakul	University of Central Florida	Novel multi-metal systemic bactericide for HLB control
18-021	Setamou, Mamoudou	Texas A&M University	Effect of bactericide treatment of citrus on fitness of the Asian Citrus Psyllid and its acquisition and transmission of <i>Candidatus Liberibacter asiaticus</i>
18-022	Stover, Ed	USDA	Delivery of Verified HLB-Resistant Transgenic Citrus Cultivars
18-023	Triplett, Eric W.	University of Florida	Development of tools to rapidly assess dynamics of: 1) antimicrobials in citrus trees and 2) antimicrobial resistance in trees and psyllids
18-024	Triplett, Eric W.	University of Florida	Foliar phosphate fertilization: a simple, inexpensive, and unregulated approach to control HLB
18-025	Wang, Nian	University of Florida	Optimization of the CRISPR technology for citrus genome editing

18-026	Wang, Nian	University of Florida	Control citrus Huanglongbing by exploiting the interactions between Candidatus Liberibacter asiaticus and citrus
18-027	Zorner, Paul	Locus Agricultural Solutions	In-field detection and quantification for CLAs to facilitate evaluation of control strategies

INVITED FULL PROPOSAL SUBMISSION

Full proposals are due on July 20, 2018 5:00 pm EDT. Only complete, invited full proposals will be accepted for funding consideration.

CONTENT AND FORM OF APPLICATION SUBMISSION:

All documents described below are required.

There are three documents that comprise the Full Proposal package:

1. The multi-page Full Proposal Cover Page and Budget (Form [CB-18](#))
2. Project Narrative Document (up to 15 pages) plus appendices
3. Subcontract Budget (Form [SC-18](#)) (complete if applicable, using a separate form for each proposed subcontract).

COVER PAGE AND CB-18 INSTRUCTIONS:

Complete the fields on the first page of the Full Proposal Cover Page.

Biohazard Regulation/DNA: If you are working with regulated agents or materials, and have an approved IBC plan, check “Yes” to indicate you are in compliance with their guidelines. Otherwise, check “No”.

Today’s Date: Enter the date on which you complete and submit your proposal.

Project Title: Enter a clear and concise title for your project.

Principal Investigator: Enter a single point-of-contact for the Principal Investigator that will be heading the project. List Co-PIs with collaborators.

Project #: As shown on posted list of invited pre-proposals.

Email: Use a valid email address for your point-of-contact. Email will be the primary means of communication within the program.

Phone: Include your phone number, along with country and city codes.

Organization: Enter the name of the organization through which you are working on this project.

Co-PIs and Collaborators: Enter the names and affiliation of your Co-PIs and primary collaborators.

Secondary collaborators may be included here if there is sufficient space. A Co-PI is anyone who has a separate budget under the project, or otherwise has a significant role in completing the proposed work. A collaborator may provide advice or materials, or receive materials for analysis. Collaborators cannot have a budget in the project and have no contractual obligation.

Please attach a table (**appendix i**) that lists the Co-PI’s and Collaborators, and each of their roles by Objective; this table is not counted in the 15-page limit.

Address: Enter your physical mailing address. This will be a secondary means of contact.

Project Duration (years): Enter the duration of your entire project in years (not greater than 3 years).

Total Funds Requested (total project): This field is populated automatically from page 2 of Form CB-18. Verify the accuracy of the total funding for your project factoring all years included in Project Duration in \$US. **CRDF does not allow inclusion of indirect costs in project budgets.**

Year 1 Funding Request: This field populates automatically from page 3 of Form CB-18. Verify the accuracy of the Total Direct amount from Page 3 of 5 representing funding you are requesting for the first year of the project in \$US.

Abstract: Summarize your project in up to a 300-word abstract. Include sufficient detail that will allow reviewers to have a clear idea of your project design and anticipated benefits. Be sure to state project objectives in the abstract.

INSTRUCTIONS FOR PROJECT BUDGET FORMS

Budget forms are included within Form CB-18 (pages 2-5), and should be completed and saved at the same time as the Full Proposal Cover (page 1) is completed. Refer to the forms menu on the Funding/Proposal page to download the budget form. Budget forms do not count towards the 15-page limit of the body of the proposal.

Stipends for graduate student involvement in the project should be included as part-time OPS, not staff. In addition, tuition waiver for graduate students is not a personnel expense but, if requested, should be included under “**Other Direct**” costs.

Complete a budget form for each year of the project as designated on Pages 3 to 5. These amounts automatically populate to Page 2, the composite budget form for the entire project period. If applicable, the Subcontract total (line 21) for each year of the project from all Form SC-18's must be manually inserted into pages 3 to 5 of the Project Budget Forms under Subcontracts (line 17 on CB-18). Verify that all amounts are correct, including Subcontractor totals.

When completing entries for personnel to be employed under this project, consider shifting the salary request to the 2nd quarter of the first year of the project if an employee is a new hire. This will more realistically reflect actual employee cost in the first year of the project. Reasonable cost of living increases can be included in personnel entries in the budget and should be described in the budget justification. Requests for travel expense should consider costs of travel related to conduct the research, as well as reasonable expenses related to presenting project results to peers and stakeholders. Details of proposed travel should be provided in the budget narrative. Do not include purchase of gasoline or vehicle maintenance as travel costs. Instead, include them as **Supplies/Materials** expense.

Do not leave any fields blank. Be sure to complete all three yearly budget forms, adding zeroes in any years of the form if needed. This will allow the forms to properly function in calculating sums and transferring values to the composite forms.

Budget Justification (narrative): This is a Word file, saved as a PDF and combined with Form CB-18. Provide a brief statement that details the following expense categories:

Personnel: Their role and specific responsibilities in the project. Please be certain to rely on your current institutional fringe rates when calculating personnel costs. Except for PI and Co-PI's, list specific position titles instead of employee names unless the individual is critical to the project. Replacement of personnel listed in this section must be pre-approved by CRDF.

Supplies/Materials: Provide general details of types of supplies and materials that will be utilized for the project and are included in the budget request. This description should demonstrate the need for these expenses to complete the objectives of the proposed research.

Travel: Provide details for in-state and out-of-state travel and purpose of the travel for each trip. Sufficient detail should be provided to assess the value to the project and to CRDF. Include the number of trips, etc. Do not include fuel or maintenance expenses in travel, but move to the **Supplies/Materials** category.

Subcontracts: Summarize the participation of other institutions or entities who will participate in the project and their required budget. (A separate Form SC-18 must be completed and submitted for each entity. Each subcontractor should also complete a budget justification.) (See 10.a.)

Other Direct: Provide justification of all costs shown.

Equipment: Provide details for equipment with cost in excess of \$500. Define the value of the equipment to completion of the project objectives. A specific quote should accompany this request.

PROJECT NARRATIVE:

This section is subject to a 15-page length limit. Submit this document as a PDF file.

1. Introduction:

- a. What is the purpose of this proposed project and how does it address a specific priority or priorities from this RFP?
- b. Summarize the body of knowledge in the literature as it relates specifically to this project.
- c. Describe and cite ongoing or recently completed significant research related to the proposed project including the work of co-PIs and collaborators.
- d. Describe preliminary work pertinent to the proposed work. Attach important preliminary data as **appendix ii**; appendices will not count towards the 15-page limit.

2. Objectives:

- a. List specific objectives to be accomplished, including the overall goal of the project and relevance of the project to the RMC-18 program priorities.
- b. Do subsequent objectives rely on the success of a prior objective? If so, how will this affect the project and how will this be managed?

3. Project Deliverables:

- a. What knowledge, information, recommendations, products or tools will result from this research?
- b. How and when will the results of this research be communicated to growers?

4. Experimental Approach: Provide a description of the project experimental design.

- a. Plant improvement projects refer to the [appendix](#) of this document for greenhouse and field trial requirements.
- b. Non-plant improvement projects that include field trials are required to clearly state:
 - i. Experimental design: Plot size, layout, treatments, blocks, replications and experimental and sampling unit.
 - ii. Site description including the number of sites and criteria for site(s)
 - iii. Application methodology (equipment, coverage, etc.) and timing
 - iv. Data collection: What will be measured, how will it be measured and how often data will be collected.
 - v. Permitting or crop destruction requirements.

5. Project Timeline: Timeline of the project with objectives and specific project accomplishments as milestones including subcontractor milestones.

6. Cost/Benefit of Proposed Intervention (if applicable)

7. Regulatory & Commercialization Considerations

This section is required for all projects developing research concepts, products or tools that are regulated by any state or Federal agency and/or have commercialization needs. Applicants must provide evidence that state and Federal regulations have been considered and a plan has been developed to improve the likelihood of successful regulatory compliance. The pathway to commercialization of products and tools must also be described to give evidence for the feasibility of commercialization. Please provide the following as **appendix iii**; this document will not count towards the 15-page limit.

- a. Describe the regulatory requirements of the concept, product or tool during the research and development stage and for implementation.
- b. Describe how this proposal accounts for regulatory considerations including:
 - i. Acquisition of necessary permits for material movement and trial work
 - ii. SOPs for all pertinent agencies to ensure compliance.
- c. Identify institutional experts, relevant state and federal agencies or regulatory consultants that have been engaged to discuss the regulatory aspect of this research concept.
- d. Describe what will be required to achieve commercialization of project deliverables.
- e. Identify collaborators or consultants that have been engaged with demonstrated expertise in product development and commercialization of this research concept.
- f. Describe intellectual property status including any tools used to develop the product that may affect commercialization.
- g. Describe plans and processes to communicate technology status in reports, presentations and publications without compromising the ability to secure the appropriate patent protection.

Questions regarding regulatory issues may be addressed to aescare@freshfromflorida.com.

Commercialization questions should be addressed to institutional offices of technology transfer.

8. Summary of previously CRDF-funded work – If the proposed project is a follow-up to a previous CRDF-funded project, please provide the following in a 2-page summary as appendix iv, which will not count towards the 15-page limit: Include only work accomplished by you in a previously funded CRDF project.

- a. Title and CRDF number of previous project
- b. Objectives of previous project
- c. Significant results of previous project, including publications.

Please note that PIs with any current CRDF funding must be up to date on required project reporting including quarterly and annual reports, at time of full proposal review, to be considered for 2018 project funding.

9. Bibliography of Literature Cited in the Project Narrative

10. Additional budget forms and narrative: The project budget forms are attached to the cover page, so will precede the project narrative. However, the following additional budget information is requested here; these forms are not included in the 15-page limit

a. Supplemental: Subcontract Budget (Form [SC-18](#)): If you have co-PI (consultants, professional services or institutions) who will receive funds from your project, complete a separate Form SC-18 for each subcontractor from another entity (the budget of cooperators from your own institution should be included in the main budget). Please include these forms for each year of subcontract and a composite budget form for the entire subcontract period as provided for on Form SC-18. A budget justification (narrative) for the subcontract budget also should be prepared and attached. The total for each year of a subcontract budget form must be entered manually into the subcontract field of the project budget form

for each corresponding year. If more than one subcontractor, verify that all are included in the Subcontract Total for each year. The Subcontract total on page 2 of Form CB-18 should calculate automatically. Refer to the application forms menu to download the Subcontract Budget forms. **NOTE: While many .pdf forms can usually be combined into one form, each Form SC-18 must be saved as a separate file to avoid fields being overwritten.**

b. Current and Pending Support: This excel spreadsheet follows project budget information and is used by reviewers to provide context (and funding detail) of ongoing research by the PI as well as other pending proposals from the team. The purpose of this form is to provide an overview of funding available to the PIs, and to communicate current and planned research that may be related to that proposed to CRDF. The form should be completed with information for each of the PIs that are contributing to the proposal. Download Current and Pending spreadsheet [Download Personnel Allocations / Current and Pending Support Spreadsheet](#)

c. Personnel Allocation Form: Like the current and pending form, this spreadsheet information is useful to project reviewers and to CRDF to assess level of effort and expertise to meet objectives. Refer to the application form menu to [Personnel Allocation Spreadsheet](#).

11. Appendices:

- i. Table of roles of the Co-PIs and Collaborators
- ii. Preliminary Data (see 1d)
- iii. Regulatory and Commercialization Considerations (see 7)
- iv. Summary of CRDF Funded Projects (see 8)
- v. Brief resumes with only relevant publications are required for all key personnel. It is important to know who will be doing the work, and what their capabilities are. Full CVs are not required. Collaborators should be included in key personnel.
- vi. Institutional Authorization form. This is typically the routing form used by institutions to document review and approval of project proposals prior to their submission. Where available, a copy of the completed institutional authorization form (e.g. UF, IFAS DSR-1) should be included here. All USDA-ARS applicants must submit an approved ARIS form. If your institution does not use such a form, a generic authorization form is provided for your use in the column at the upper left of this page.
- vii. Letter of authorization from each institution for which a Subcontractor Budget form has been completed. This statement allows CRDF to know that subcontractors have agreed, if the project is approved, to complete the objectives with the budget details as provided in the proposal.
- viii. Provide a statement of commitment from each Co-PI and Collaborator.
- ix. Other Relevant Information

PROPOSAL LAYOUT DETAILS

Proposals should be written in English and submitted as email attachments in Adobe PDF format. Page margins should be one inch on all sides. Use Times New Roman or a similar typeface set to 12-point and single line spacing. Documents exceeding word or page limits will not be considered.

Page numbers should be placed on the lower right-hand corner with the Principal Investigator name and the page number (e.g., Robins-2).

Each file submitted as a component of your full proposal should be named with the Principal Investigator name and CRDF-assigned project number provided in your email and form identifier (e.g., Robins_18-0##_proposal, Robins_18-0##_CB18, Robins_18-0##_SC18). When naming files to be included in your Full Proposal submission avoid using special characters (! @ # \$ % &) in the filename.

Invited RMC-2018 Full Proposal Packages should be emailed to catp@citrusrdf.org.

Any questions may be emailed to catp@citrusrdf.org.