Project Apis m.

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REQUEST FOR PROPOSALS

PROJECT *APIS M.* ON BEHALF OF THE HEALTHY HIVES RESEARCH INITIATIVE

JANUARY 1, 2023

Background

Healthy Hives, an initiative dedicated to identifying tangible solutions to improve honey bee colony health in the U.S. Launched in 2015 with an initial $1 million grant from Bayer, and an additional $500,000 provided in 2020, Healthy Hives has funded beekeeper-driven projects and research at a wide range of academic institutions around the world. Projects are aimed at finding ways commercial beekeeping operations can improve production and efficiency while reducing costs.

"I spend tens of thousands of dollars on pollen supplements every year to, theoretically, keep my bees as strong as possible. But, like many beekeepers, I don't always have the data I'd like to choose which brand to use in my region and setting. When I suggested that a scientist study pollen supplement brands & their long-term impact on a truckload of my bees, PAm funded that project…" -Blake Shook, Desert Creek Honey

Shook collaborated with Dr. Vanessa Corby Harris, of the USDA Carl Hayden Bee Research Center in Tucson AZ, which allowed the project to be more field-based and commercially relevant comparing the effectiveness of several nutritional supplements and completing an economic analysis for beekeepers. This study was recently renewed for a second year.

PAm is very glad to have this significant investment by Bayer, to help deliver solutions for beekeepers, in talking with beekeepers and researchers, we anticipate some exciting work in this next round of proposals.

Priority Areas for Funding

With this call for research proposals, PAm is requesting proposals for research addressing ways commercial beekeeping operations can improve production and efficiency while reducing costs. Current specific areas of interest include:

- Conduct an economic evaluation of apicultural practices to quantify the true “cost” of beekeeping
- Compare and contrast current best management practices (BMPs) designed to understand how different management techniques (i.e., nutrition supplements, Varroa management, indoor storage) contribute to overall beekeeping success
- Evaluate the use of “smart hive” technology to monitor commercial migratory operations
- Evaluate available U.S. genetic lines of bees for traits related to colony health (disease and pest resistance) and productivity (pollination and honey production) and identify favorable traits for beekeeping operations.

- Expand current knowledge about Tropilaelaps sp. mites, including projects related to surveillance, emergency response/preparedness, bee health impacts, and management.
- Research the contribution of pollinator habitat augmentation/creation on colony health and survival.

This RFP coincides with Project Apis m.'s annual funding cycle. Other projects addressing PAm's general priority areas may be considered for other funding sponsors and may be submitted through our general application window. Research outside the U.S. is possible (all application materials must be in English). The goal of this research is to help producers maintain colony health and honey production. Multi- and single-year proposals will be considered. PAm has funded projects up to $450,000 over 3 years and projects as small as $5,000 for one season's work. The amount of funds available for a particular proposal will depend on the number and merit of successful proposals.

Proposals must be submitted to Project *Apis m.*'s online portal here by midnight (PDT), February 1, 2023. Copies of proposals will be distributed to PAm's Scientific Advisory Committee and a representative of Bayer Crop Science for review. Final funding decisions are made by the PAm Board of Directors.

Submission Guidelines

Please limit proposals to 5 pages of project description (e.g., introduction, relevance to beekeeping industry, background, aims/objectives, experimental plan, expected results, potential pitfalls and solutions, plan to disseminate information, summary), and **10 pages total** (including budget justification, PI information, etc., but excluding references).

Required elements include:

1. **Title, Principal Investigator, Date** – Clearly state the title and principal investigator (PI) of your proposal. Provide the PI's title, address, email address and telephone number. List cooperating investigators and beekeeping businesses with their names and email addresses. Cooperating investigators and beekeepers must be aware of this proposal. If cooperating investigators or beekeepers are contacted by PAm and are unaware that their names have been added to the proposal, the proposal will not be considered. Please include date of submission.
2. **Information Regarding Prior or Simultaneous Submissions** – Proposals submitted to NHB/PAm that have been previously or are concurrently submitted to other funding organizations (e.g., USDA, NSF, etc.) must indicate which organization(s) have reviewed (and/or are simultaneously reviewing) the proposal and must include a maximum one-page summation of that review process (e.g., changes made to address reviewers' concerns).
3. **Date and Duration of Proposed Study - Project Timeline** – The proposed project timeline should begin early in 2023. Include proposal details for the anticipated duration of the study as well as planned submission of updates and final report to PAm.
4. **Problem and Significance** – To provide a background to the proposed study, state the problem the study addresses and its significance to managed honey bee colonies and/or pollinated crops. If this is a continuation of a previous PAm or NHB project, please state the title and funding provided in the previously funded project, the outcome of the previously funded project and justification for continuing research.
5. **Objectives / Specific Aims** – Clearly outline the objectives of the project.
6. **Experimental Design / Materials and Methods** – Describe the experimental approaches

that will be utilized to address the specific aims, detail the specific methodology that will be utilized to address the project's objectives. This description should be scientifically sound and include logically linked experiments. Include preliminary data when possible. Please address the feasibility of the project and include potential pitfalls and solutions when necessary.

7. **Intended Outcome** – Give a brief statement of the intended outcome of the project. This may be used to better describe your project in a press release or website, it should blend the objectives into a concise summary of the project while providing the bottom line justification for its funding.
8. **Dissemination of Findings, including publications and presentations** – Indicate the plan to present findings at professional meetings, conferences, and in publications (be specific). In addition, clearly state how you will share this information with beekeepers.
9. **Budget Request** – Include a) salaries and benefits, b) supplies, c) equipment, and d) travel. If applicable, list other entities funding this research and the amount they are contributing. If this proposal is being submitted for consideration by other organizations, please list the organization and the amount requested. PAm and NHB policy is consistent with California commodity groups; we do not pay overhead or indirect costs. (These, typically, are expenses such as rent, utilities, depreciation, insurance, administrative or miscellaneous supplies, legal or accounting services, salaries/wages allocated to the project for persons not working directly on the project.) If proposal is for matching funds, then NHB/PAm funds will not be released unless the PIs obtain funding for the entire project and/or clearly state how PAm funds would be utilized independent of additional funding.
10. **Economic Feasibility for New Products** – If the study involves new product development, please provide economic evaluation of the new product. This would include projected cost of the final product. Justification for the projected cost and cost-effectiveness will be a prime consideration in evaluating the proposal.
11. **Information regarding correspondence with PAm or Bayer** regarding the project prior to proposal submission.
12. **References** – Provide literature references pertinent to your proposal. Letters of Support can be included but are not required.

Selection Criteria

PAm's Scientific Review will review proposals and make decisions based on the following criteria:

1. Compatibility of the research objectives outlined in the project description with priority areas and focused on solving problems relevant to the commercial beekeeping industry.
2. Likelihood of obtaining practical/usable results for the beekeeping industry.
3. Overall scientific merit and originality, including the project's strengths and weaknesses.
4. Use of adequate experimental approaches, inclusion of logically linked experiments and project feasibility.
5. Inclusion of an assessment of the potential pitfalls (or risks) associated with the project and alternative strategies to mitigate those risks.
6. Inclusion of unique strategies, sustainable solutions, or establishment of knowledge that will lead to sustainable solutions in the long-term.
7. Likelihood of success (i.e., PIs credibility, record of success, experience with techniques, relevant cooperators, etc.).
8. Adequate indication that PI(s) will communicate their findings to commercial

beekeepers.

9. Economical and adequate budget for proposed research.
10. Proposed dissemination of findings.

Approval and Funding

PAm will notify the PI shortly after funding decisions are made by the PAm Board of Directors, which are anticipated by April 2023. Unless other terms are stated, 75% of the requested funding will be provided at the commencement of the study, with the remaining 25% disbursed upon receipt of the final report.

Expectations

PAm assumes projects will be executed as stated in the proposal, specifically with reference to the defined objectives, timeline, and budget. Successful applicants will sign an agreement with PAm. Interim and annual reports will be provided to PAm, and key project updates or outcomes will be shared with Bayer.

Questions Contact patty@projectapism.org with brief questions concerning submission of proposals to Project *Apis m.*