

PPIC Technical Committee Meeting, Thursday, Dec. 5th, 2019 10-11:30 am, FSsN 225G

In attendance: Pam Ismail – UMN, PPIC Director
Amy Mathiowetz – UMN, PPIC Manager of Operations
Lolly Occhino – AURI
Clint Johnson – ConAgra Brands, via Webex
Dina Fernandez – ADM, via WebEx
Steve Hess – Hershey, via WebEx
Carrie Lendon – Cargill, via WebEx
Gabriela Perez-Hernandez – Kellogg, via Webex
Wajira Ratnayake – Ingredion, via Webex

1. **Introductions and Welcome to Gabriela Perez-Hernandez from Kellogg**
2. **Quick re-cap of previous meeting (minutes in Appendix 1 of agenda)**
3. **Updates**

Objectives:

- a. **Happy first birthday, PPIC!**
- b. **Update on Protein Basics Short Course (Sept. 5-6th, 2019):** Widely sought with 47 attendees from 26 companies.
 1. You can find event evaluation and feedback in Appendix 2 of meeting agenda
 2. Lolly's feedback (attended Short Course): good mix of lecture vs. hands on; pleased with number of participants and the broad range of companies represented and great networking opportunities
- c. **Update on Research Spotlight Meeting (Oct 17th, 2019):** 105 attendees from 45 companies & organizations; keynote speaker: Julia Keppler, Wageningen University and Research; other speakers from our pool of PPIC researchers; several networking sessions, booths, and posters.
 1. You can find event evaluation and feedback in Appendix 3 of meeting agenda
 2. Wajira found to be very well-organized with great presentations
- d. **Update on PPIC-funded projects: first quarterly report due Dec. 10th**
 1. Two projects were funded after tech committee requested changes:
 - i. "Impact of cold plasma treatment on pea protein structural and functional characteristics" Ismail et al.
 - ii. "An interdisciplinary strategy for improving hemp protein as a food ingredient through plant breeding and processing" Michaels et al.
 2. As soon as PPIC receives quarterly reports, will share with technical committee, who can provide any feedback they have
- e. **Update on FFAR proposals: Two submitted**
 1. Next Generation Crops; Title: "Develop Camelina and Pennycress Lines as Plant Protein Sources for Food Use via Accelerated Breeding Methodologies"; Seven interdisciplinary researchers; Matching funds of \$327,332 for a total of \$654,663 (NOT FUNDED)
 2. Plant Protein Enhancement Project; Title: "Legumes of the Future: Developing Methodologies and Germplasm to Enhance the Functionality and Nutritional Quality of Pea Protein"; Five interdisciplinary researchers; Funds requested: \$1,167,797 (PENDING)

- i. Submitted in October; did not require matching dollars
- f. **Proposal to GFI:** submitted pre-proposal and got invited to submit a full proposal; Title: “Characterizing and Texturizing Proteins from Pulses to Form Fibers with Textures that Mimic Chicken; Three interdisciplinary researchers; Funds requested: \$250,000 (IN PREPARATION)
 - 1. Full proposal (phase 2) will be submitted in a couple of weeks
 - 2. This is a 2 year proposal looking at extrusion technologies

4. Efforts to recruit new members

Objectives:

- a. **Announcing new members** (Kellogg, General Mills, Coca Cola, Nutriati, Benson Hill), additional potential member: Motif Food Works
 - a. 6 at partner level and 4 at associate level
- b. **Share conversations with different companies**
 - a. Reviewed “PPIC Exec Board Shared Resources” Google doc, where we keep track of primary company contacts and membership status; please refer to this document (will share with committee) for updated conversations with potential members/researchers/collaborators
 - b. Conversations since last tech committee meeting: Benson Hill (member); Buhler (considering membership vs. in-kind support via use of processing equipment); Motif Food Works (membership agreement in legal review); Food Systems Innovations (potential collaborator); Believe in Bambara (no membership at this time; collaborating on separate project); Danone (considering membership; awaiting follow-up); Novozymes (in conversation with for past year; looking to do proprietary projects with PPIC); ST Equipment & Technology (STET) (considering membership vs. in-kind support via use of processing equipment); Saputo (considering membership; awaiting follow-up); Calyxt (food ingredient company in Roseville; potentially interested in membership; awaiting follow-up); Blacktop Holdings (entrepreneurial company looking to work on project with PPIC); Open Philanthropy Project (gathered information on PPIC and will relay information to grant funders); ideas 42 (nonprofit behavioral science consultancy looking for ways to collaborate with PPIC); Kevin McPhee/Montana State University (potential researcher; awaiting follow-up); reached out to Firmenich and Givaudan – waiting to hear back.
 - c. Carrie: Is Food System Innovations a funding agency? – not a funding agency per say but more of an advisor to major donors/investors on the best leverage for their donations and grants, mainly toward projects under the overarching umbrella of animal welfare (focus on alternatives to animal food products)
 - d. Wajira: Do we have a goal for membership/how many members the PPIC can accommodate and how many researcher focuses we can accommodate with our available resources
 - i. Pam: Original goal for PPIC was 15 members in the first year; the way the center is set up is not based on 1 researcher/laboratory – currently 20 researchers internal and external to UMN that can provide cross-lab, cross-facility resources. We do not currently have capacity limit and as we recruit researchers, our ability and capacity will increase
 - ii. 1 -1.5 million in funding per year will allow us to fund 10-15 different projects across the pool of researchers in the Center

c. Discuss new strategies for recruiting additional partners

- a. Carrie: equipment manufacturers would be a good complement to existing member companies; given focus of GFI proposal, makes sense to continue to seek out potential members in processing community
- b. Amy will share Exec Board Shared Resources document so technical committee can follow-up on conversations with companies we have reached out to
 - i. Morrad Fadel from Danone has reached out to Clint for feedback on PPIC; Clint will follow up
 - ii. Kellogg works pretty closely with Mycotechnology; Gabriela can reach out to Bhupendra
 - iii. Carrie will follow up with Jenni Harrington from Buhler

5. Feedback after one year with PPIC

Objectives:

- a. **Share thoughts on PPIC experiences and value**

Wajira (Ingredion):

- Regarding projects such as the FFAR Legumes project that is pending and the GFI pre-proposal – are these generally applicable to problems all members are interested in?
 - Pam: The hope with Center-funded projects is to meet research priorities that this committee has agreed upon. First and foremost, we are running research that address priorities that members have found importance in to pursue. These two projects are meeting research priorities that have been identified by the Center, which were agreed upon by technical committee
- Looking at posters at Research Spotlight Meeting, thought almost all were very relevant to current industry problems as they relate to plant proteins

Dina (ADM):

- First year was a period of establishment -- A lot of time trying to establish Center; Pam has done A great job of adding more members and strengthening the technical committee to guide research in plant proteins space; this year was a year of getting ready for the next year – involving more companies (we have robust list of companies involved), getting ready to have collaboration and trying to produce results; \
- ADM sent two members to short course and received great feedback. Need to continue similar events for next year
- In next year, would like to see more research that would generate data that is relevant in plant proteins space

Clint (Conagra Brands):

- Echoed that this was establishment year for PPIC;
- Conagra Brands looking for more traction/results and research opportunities in year 2.
- Received good feedback on short course; more specific focus for short course in future years?

Carrie (Cargill):

- PPIC has a good structure with its different boards. The way we set priorities, with everyone weighing in, is beneficial to all members.
- PPIC has used good creativity in finding different funding avenues/in-kind support.

- Scientific exchange/education that PPIC has enabled through two events is critical to Center – helps to grow community; PPIC helps to fill space of being a source of education in this space
- In year 2, continue to focus on growing member companies and diversity of members.

Steve (Hershey):

- Our motivations for joining PPIC were two-fold – 1) engage in pre-competitive research to address fundamental challenges that all companies need solved and 2) be engaged in plant protein ecosystem. Conversations here [at technical committee meetings] and at Research Spotlight Meeting have addressed second motivation. For Hershey, will be important to keep building project portfolio, addressing motivation 1, which is totally in scope of Center for year 2

Gabriela (Kelloggs)

- PPIC has accomplished quite a bit in year 1; in year 2, looking to further precompetitive research to advance main fundamental knowledge in plant proteins that is priority for many companies.
 - In particular, project proposal for GFI on meat analog texture is important to Kelloggs
- PPIC is filling a gap in the plant proteins space by having researchers across diverse fields and institutions

Lolly (AURI):

- Center has made great progress; agrees with pursuit of membership.
- Struggled a little with first round of RFPS and appreciates pending discussion for how to improve the process. Tech committee members anxious to get to stage where more funding is available so there are more projects to consider.
- Research Spotlight Meeting and Short Course were excellent -- add to credibility of PPIC and gets name out there. Anticipates that a Short Course challenge will be keeping material fresh enough; is it okay to offer the same thing over and over again, as we want to bring in new as well as old attendees.
- PPIC went through a good process to come to current list of priorities; appreciate that all opinions of group were considered.

6. Current funds

Objectives:

- a. Provide an overview of current funds** (2018-2021 after 15% IDC: \$520,080 from membership dollars; remaining from first year after funding two \$50K projects: \$81,360; year two: \$169,360; total available in 2020: \$250,720)
 - a. Assuming all members will stay on
 - b. There are dollars to fund at least two more projects; Pam interested in short term projects for next ~2 years to show output and results to show productivity
 - c. Cushion in budget for administrative costs
- b. Discuss potential use of funds currently available: Fund two more \$50K projects in 2020**
 - a. Would like to have something funded by end of Spring 2020, beginning of Summer
 - b. Do you agree to fund at least 2 short-term projects in 2020?
 - i. General agreement of committee to fund 2-3 proposals dependent on quality of proposals and number submitted

7. Second Round of RFP

Objectives:

a. **Decide on timing: before or after revision of research priorities**

Do we want to go with RFP based on current list of priorities or wait until after the spring Research Planning Meeting, where we revise our priorities (do we think they will be revised a lot or will remain similar?)

- a. Given the robust process for developing list of current priorities, don't feel that they will change considerably; still relevant to industry's fundamental questions in plant proteins space
- b. Conclusion: 1) Put in spring RFP with current research priorities (do not wait for Research Planning Meeting); 2) Meet as technical committee to hone in on specific focus areas within current research priorities for RFP; 3) Use Research Spotlight Meeting to revise priorities to guide 2021 RFPs

8. Research Planning Meeting

Objectives:

a. **Decide on timing:** when in the spring would be a good time?

- a. Don't want to saturate people; what is a good time between events to optimize attendance
- b. Tech Committee agreed on Mid-end April (after April 20th Wajira available): too far into May can run into summer travel; will hear from Exec Board then finalize date

b. **Discuss structure of the meeting:** half a day of presentations from industry speakers, half a day of round table discussions (discussion of priorities/ranking), networking sessions with booths.

- a. Not a research focus. Will have industry speak to challenges and opportunities in the space and will broadcast PPIC's research priorities for reassessment and re-ranking
- b. Technical Committee has a preference for 1 day; some comments from Research Spotlight Meeting suggested extending to 2 days

9. Training Programs in 2020

Intent for 1 workshop or short course per year (Plus the Research Spotlight Meeting and Spring Planning Meeting for total of 3 events)

Objectives:

a. **Thoughts on offering same short course in Sept. 2020**

- a. A lot of survey comments from first Protein Basics Short course requested more information on formulation on plant proteins – not enough time to go into depth but could be its own topic?
- b. Dina: In the past year, a lot was going on in the field with protein basics (i.e. IFT and other meetings focused a lot on basics of plant proteins): PPIC needs to evolve every year and show new things; can show more advance in field if we change topics.

- c. Steve: Expanded course proposal sounds exciting. But also nothing wrong with offering same course again especially considering high demand in first year for Protein Basics
- d. Lolly: Consider 1 day where everyone is together lecture style. Second day can offer variety of tracks and attendees can choose which track is of more interest to them. People can get out of it what they need specifically.
 - Committee members also discussed option to register for 1, 2, or 3 days; Keep short course same for 1-2 days, then add 1 day of flexible choices that changes with year
- e. Could potentially rotate theme biannually
- b. Discuss designing training program or workshop for 1-2 employees from each partner company**
 - a. Come up with proposal of topics and discuss at later time

10. Next steps

Objectives:

- a. Set up timeline for RFP and discussion of review process**
 - a. Should have 1 or 2 researchers on committee (as written in bylaws) that can help in reviewing proposals; will invite researchers that did not submit proposals
 - b. Will set up training for evaluation process with committee;
 - i. Discuss how to respond to PIs to make proposal better or further address industry needs; technical committee can request adjustments to proposals to better address their companies' interests
 - c. PPIC is developing new rubric based on AURI evaluation
 - i. Lolly noted that a rubric would be good, as the scores awarded in the first round of RFPs didn't quite reflect what they were thinking as a committee
 - ii. Pam: could also consider MDA format, where researchers actually present; could implement something similar – Wajira thinks this would be good idea.
- b. Start organizing the Research Planning Meeting
- c. Discuss new ideas that partners would like the PPIC to implement

Action Items:

- Amy will share quarterly reports from PPIC-funded projects with technical committee once submitted
- Amy will update and share the list of industry contacts
- Clint Johnson will follow-up about PPIC with Morrad Fadel (Danone)
- Gabriela Perez-Hernandez will follow-up about PPIC with Bhupendra Soni (Mycotechnology)
- Carrie Lendon will follow-up about PPIC with Jenni Harrington (Buhler)
- Amy and Pam will work together on developing second RFP and RFP evaluation based on AURI's rubric and share with technical committee for feedback; Pam will also work on getting two PPIC researchers on tech committee to help with review process and will set up a training for evaluation process with committee
- Amy and Pam will start to organize Research Planning Meeting for mid-end April (preference for after April 20th) and start brainstorming speakers after reviewing with Exec Board