COLLABORATIVELY GROWING THE LANDSCAPE OF PLANT-BASED PROTEINS

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Mission
The Plant Protein Innovation Center (PPIC) mission is to bring together interdisciplinary researchers and industry partners to deliver to the supply chain new nutritious and functional plant protein ingredients and products, working all the way from breeding and genetics to processing, formulation, and marketing.

Approach
The PPIC will address industry-identified plant-protein challenges and opportunities to develop a wealth of interdisciplinary research.
Why PPIC? Why Now?

The PPIC will not only bring economic gain to the industry, but will also address the consumer desire for nutritious and healthy food, have a positive impact on the environment by seeking and utilizing sustainable crops, provide additional sources of protein for the growing population, and provide revenue to farmers.
How? The PPIC Model

Research will be mainly **Pre-Competitive** and **Non-Proprietary**

Will focus on fundamental science that addresses industry needs and consumers demands
The PPIC Model: 
Coming Together to Grow Research
Research Areas

- Agronomy
- Breeding & Genetics
- Agronomy
- Nutritional Science & Technology
- Food Science & Technology
- Informatics
- Analytical Chemistry
- Bioengineering
- Agricultural Economics
- Biomaterial Science
- Chemical Engineering
- Biochemistry
- Business Management
- Statistics
Nutrition
Breeding & Genetics
Food Science & Technology
Agronomy
Analytical Chemistry
Agricultural Economics
Bioengineering
Biomaterial Science
Chemical Engineering
Biochemistry
Business Management
Statistics

Research Areas
Proteomics
Metabolomics
Non-Thermal Processing
Breeding & Genetics

Experts in Various Fields
Protein Functionalization
Protein Bioactivity
Protein Chemistry
Human Nutrition
Dietetics
Product Development
Protein Extraction & Concentration
Encapsulation
Toxicology

Broad Instrumentation & Research Capabilities
Proteomics and Mass Spectrometry Center
Polymer Characterization Facility
NMR Center
Analytical Biochemistry Center
Encapsulation Center
Sensory Center
Biotechnology Institute
Food Processing Center (Pilot Plant)
Imaging Center
Equipped Research Labs
Identified Research Priorities

Production
*Primary research focus areas related to breeding, sustainability of the supply, and crop diversity*

Processing & Formulation
*Primary research focus areas related to extraction methods, unique processing, co-products, food systems, high value end use*

Application
*Primary research focus areas related to flavor, functionality, and nutrition*

https://ppic.cfans.umn.edu/research/research-priorities
Who?
- Current industry partners

- ADM Partner
- Kellogg's Partner
- Conagra Brands Partner
- Hershey Partner
- Ingredion Partner
- Motif Associate Member
- Coca-Cola Partner
- General Mills Associate Member
- Nutriati Associate Member
- Benson Hill Associate Member
Who?

• Researchers
  - Twenty interdisciplinary researchers across the University of Minnesota and from external institutions!
    https://ppic.cfans.umn.edu/expertise/researchers

• Students and post-docs!
Become a Member of the PPIC!

*With investment and collaborative effort between industry and researchers, we can innovate!*

**Associate**
- Companies that have less than $5 million annual revenue* and for organizations wishing to join the center
- A yearly membership fee of $6,000/year for 3 years

**Partner**
- A yearly membership of $20,000 for 3 years for companies that have $5-100 million annual revenue;
- A yearly membership of $40,000 for 3 years for companies with more than $100 million in annual revenue

- 20% discount for multi-year commitment (more than three years, e.g. year 4 and 5 will be 20% discounted)

*A company that makes more than $5 million annual revenue may join at an associate level for a one-year trial period, non-renewable. If they wish to remain a member of the PPIC they must join at the partner level the following year and will have to sign a new agreement.*

https://ppic.cfans.umn.edu/model-involvement
Benefits to Members

Associate Level
- Contribution to research ideas
- Access to non-proprietary research findings
- Involvement in research projects
- Access to workshops and short courses (free for two reps from each company), free registration to research spot-light and to planning meetings (up to two reps from each company)
- Opportunity to host booths for their respective company at spring planning meetings and fall research spotlight meetings
- Interactions with scientists from various disciplines, and general networking

Partner Level
- Having an R&D scientist on the technical committee. Having R&D scientist on the technical committee will allow for having an impact on the direction of pre-competitive research, and choice of workshops and training programs
- All the benefits listed above for associate level.

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Benefits to Members

Other benefits and outcomes

- Scientific exchange
- Interdisciplinary interactions and connections
- Trained professionals for future hires
- Access to resources (internal and external) and other centers within the University of Minnesota at a reasonable cost (through projects run by students and post-docs)
- Additional resources to speed up project timelines and reach goals faster
- Training programs for current employees and potential future hires
- Participation in joined projects

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PPIC Outreach

- Conferences
- Workshops
- Training programs
- Short courses (e.g. protein chemistry, extraction technology, formulations, flavor chemistry)

*Outreach will allow for the exchange of knowledge between the public and private sphere*
Partner with us today to change the landscape of plant-based protein tomorrow!
Thank You to Our

Technical Committee

– Carrie Lendon (Cargill)
– Clint Johnson (Conagra Brands)
– Dina Fernandez (ADM)
– Steve Hess (The Hershey Company)
– Lolly Occhino (AURI)
– Wajira Ratnayake (Ingredion)
– Gabriela Perez-Hernandez (Kellogg’s)

Executive Board

– Julie Simonson (Schwan’s)
– Stacy Pyett (Wageningen University & Research)
– Denis Chereau (Improve)
– Christina Connelly (Protein Highway of the Canadian Consulate)
– Jason Robinson (AURI)
– Greg Cuomo (University of Minnesota)