2018 ANNUAL REPORT
Cornell Institute for Food Systems Industry Partnership Program
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CONTACT INFORMATION

JULIE STAFFORD, PhD
Industry Liaison Officer
Phone 607-255-0860
Email jls653@cornell.edu

HOLLY HOUSTON
Administrative Assistant
Phone 607-255-2470
Email hns35@cornell.edu

JANETTE ROBBINS
Student Engagement Specialist
Phone 607-255-7637
Email jmr65@cornell.edu

JILL MONTI
Technical Lead
Phone 607-255-4322
Email jm2384@cornell.edu
As one of the premier food science programs in the nation, the Cornell University Department of Food Science applies the principles of science and engineering to ensure the nutritional value, safety, and quality of foods in the United States and around the globe. The Cornell food science program integrates the disciplines of chemistry, biology, nutrition, physiology, biotechnology, and engineering to ensure that all people have access to healthy and affordable food.

The Cornell Institute for Food Systems Industry Partnership Program (CIFS-IPP) is a vibrant, public-private partnership that expands and enhances engagement of Cornell University faculty and staff with industry scientists, engineers, and business leaders throughout the food system. With expertise in business and industry, CIFS-IPP finds solutions to today’s food system challenges while shaping tomorrow’s discoveries. The Cornell Institute for Food Systems informs and advances industry practice with cutting-edge science that propels food industry partners to the forefront of research, development, and technology.
MESSAGE FROM THE STEERING COMMITTEE

We are executives from divergent parts of the food system who share a passion for feeding the world through innovative solutions, which we believe are possible through engagement with Cornell University’s Department of Food Science and the Cornell Institute for Food Systems Industry Partnership Program. Each of our organizations has benefited in a myriad of ways through our engagement with the university and the community of companies in this program.

At the Executive Board meeting of CIFS-IPP in August 2017, we recognized the value of further committing our time and combined experiences to the benefit of this program. We believe that partnering to bring world-class leadership and expertise in food systems to the global food industry is of the utmost importance as ingredients, processing, and food security are all constantly evolving.

We are enthusiastic for the future of CIFS-IPP and the untapped potential for what we can accomplish together!

We encourage all those reading this annual report to consider joining CIFS-IPP and together bettering the future of our food system.

Respectfully,

Nick Dokoozlian
Vice President of Viticulture, Chemistry, and Enology
E&J Gallo

Brooke Schwartz
Vice President of Strategy and Marketing
Rheonix, Inc.

Sharon Webster-Tolin
Senior Director of Marketing & Innovation
Baldwin Richardson Foods
CIFS-IPP EXECUTIVE BOARD

DAMIAN BROWNE
Senior Director, Ingredient Discovery and Applications
Global Beverages
PepsiCo

NICK DOKOZLIAN
Vice President of Viticulture, Chemistry, and Enology
E&J Gallo

JASON JACOBS
Vice President of Technical Services
Beech-Nut Nutrition Company

JIAO (GABY) JIE
Vice President of International Affairs
Qinghai Dasong Agriculture Technology Ltd.

CASEY KOEHNLEIN
General Manager
Marshall Ingredients
BROOKE SCHWARTZ  
Vice President of Strategy and Marketing  
Rheonix, Inc. Technology Ltd.

WILLIAM STRASSBURG  
Vice President of Strategic Planning  
Wegmans Food Markets

GERHARD UFHEIL  
Leader Product and Technology Development  
Nestlé

SHARON WEBSTER-TOLIN  
Senior Director of Marketing & Innovation  
Baldwin Richardson Foods

GREG YEP  
Executive Vice President, Chief Scientific and Sustainability Officer  
International Flavors and Fragrances
CIFS-IPP DEPARTMENT OF FOOD SCIENCE ADVISORY GROUP

In the winter of 2017, Olga Padilla-Zakour, Food Science Department Chair, formed the Department of Food Science Advisory Group. As one of the three groups that help to guide our team, the Advisory Group works on optimizing the relationship between faculty and industry. We are looking forward to finding fresh, new ways to engage on addressing shared industry challenges through the group’s guidance.

ROBIN DANDO
Associate Professor
Department of Food Science

SAM NUGEN
Associate Professor
Department of Food Science

JULIE STAFFORD
Industry Liaison Officer
Industry Partnership Program

MATT STRATTON
Business Manager
Department of Food Science
MESSAGE FROM INDUSTRY LIAISON OFFICER

2017 has been a year of momentum for the Cornell Institute for Food Systems Industry Partnership Program with increased industry leadership and membership, an enhanced sense of community including a focus on our graduate students and an expansion of cross-campus collaborations.

We are grateful to have a dedicated Steering Committee emerge from our CIFS-IPP Executive Board meeting last year, including Nick Dokoozlian of E&J Gallo, Brooke Schwartz of Rheonix and Sharon Webster-Tolin of Baldwin-Richardson Foods. Together these forward-thinking executives have provided insights and guidance on next steps for the organization throughout this year. It is clear that they are committed to our goal of remaining as a premier public-private partnership for the global food industry.

Our CIFS-IPP membership expanded to 25 by yearend with the addition of International Flavors and Fragrances (IFF), Nestlé Health Science, Qinghai Dasong Agriculture Technology and Shark Ninja. IFF is a compelling addition with their expertise in ingredients from around the world. Nestlé Health Science recently established its presence in Bridgewater, NJ and is working at the exciting intersection of food and health. Dasong’s new division Happy Kiddo’s expands our impact to baby food in China. Shark Ninja is one of the fastest-growing companies in America and provides cutting-edge technology for today’s kitchen. This is our first consumer appliance member. We value how each of these new members reach across the food system, encouraging consumers to embrace more nutritious, health-supporting foods.

We have witnessed the evolution of CIFS-IPP from a formal program to a vibrant community. This has been evidenced by collaborations occurring among two or more companies engaging together with faculty and graduate students to achieve shared research objectives. Our graduate students represent the talent pipeline of tomorrow’s scientific leaders. In the past year, CIFS-IPP was proud to provide summer support for six graduate students. You will meet some of them in this Annual Report on pages 12 and 13. In the coming year, we will be pursuing more ways for graduate students and
CIFS-IPP members to collaborate and discover the synergy necessary for innovative food solutions.

Finally, CIFS-IPP was pleased to offer members recent opportunities to interact with each other and our faculty. Late in the year we hosted the reception kicking-off the standing-room-only Validation of Nonthermal Technologies Symposium. We have also enjoyed the enviable position of leveraging cross-campus collaborations for the benefit of our members, through the Albert R. Mann Library of the College of Agriculture & Life Sciences, Cornell Dining and the SC Johnson College of Business. These relationships and more are to the long-term benefit of our CIFS-IPP members.

We look forward to 2018 and continuing to bring world-class leadership and expertise in food systems to the global food industry!

Warmly,

Julie
**Ph.D. candidate**

**Advisor:** Dr. Julie Goddard

**Research Focus:** Enzyme immobilization for food waste processing

Stephanie’s research focuses on the stabilization of enzymes to increase food processing sustainability through waste stream upcycling. Each year, large amounts of waste are produced by the food industry as byproducts of processing. These waste streams have the potential to be transformed into useful ingredients by enzymes. However, the enzymes needed to catalyze these reactions are often unstable in the reaction conditions. Enzyme immobilization stabilizes the enzymes and allows them to operate outside their ideal conditions. Understanding how enzymes behave when immobilized allows for tailor-made enzyme systems, and increases the commercial feasibility of enzymatic processing.

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**M.S. candidate**

**Advisors:** Dr. Olga Padilla-Zakour and Dr. Robin Dando

**Research Focus:** Feasibility of acid whey from waste stream to a valuable ingredient

Julie’s preliminary work has been performed in the baked goods category, as a replacement for either water, milk, or buttermilk across sweet or savory baked goods. Five baked goods products have been selected to study the effects of formulating them with acid whey.

An acid whey based Ranch dressing was developed by replacing the buttermilk with acid whey and adding gums for viscosity. According to sensory study of 97 participants, the product was similarly acceptable in regards to taste, flavor and texture. A new cheese dip was also developed following the same processing boundaries comparing retail products similar in various factors (i.e. ingredients, nutritional values, ingredient cost.) The best formulation was selected based on sensory studies and was fully evaluated by sensory panelists. The final formulation containing 65% by weight acid whey was compared to four brands of “Mild salsa con queso” available on the market. Consumers accepted the acid whey-containing product as being on par with current commercial products indicating great promise for commercial, clean label applications.
Josh Herskovitz
Ph.D. candidate
Advisor: Dr. Julie Goddard
Research Focus: Nonmigratory active packaging utilizing metal chelators

Josh’s research investigates the increased efficacy of preservatives with use of metal chelators against particularly resilient bacteria. Metal chelators contain specific functional groups which strongly and preferentially bind to metals. This is of particular use in antimicrobial efficacy in that metal cations help stabilize the cell wall of bacteria. Including metal chelators in the treatment of food products allows for deeper penetration of preservatives and a more complete removal of antimicrobial resistant bacteria by destabilizing bacterial cell walls. Additionally, metal chelators increase shelf life by preventing degradation, which may induce color or flavor changes in the finished product, leading to the dissatisfaction of consumers and unnecessary food waste. As part of the cleaner labels initiative set by consumers, Josh’s research goals include the adaptation of nonmigratory active packaging with metal chelating compounds for reduction of food waste and consistency of food safety.

Zhuangsheng (Jason) Lin
Ph.D. candidate
Advisor: Dr. Julie Goddard
Research Focus: Synthesizing active food packaging materials

Jason presented the research he conducted in the summer at IFT, and won a 3rd place in the food packaging division student poster competition. Jason and his advisor Julie Goddard have recently published their work as a featured article in the Journal of Food Science.

Synthetic metal chelators (for example, ethylenediaminetetraacetic acid, EDTA) are widely used as additives to control trace transition metal-induced oxidation in consumer products. To address consumer and retail demands for clean label foods and beverages without a corresponding loss in product quality and shelf life, producers are seeking next generation technologies such as active packaging. In the summer, Jason worked on a new synthesis method for producing metal-chelating active packaging films, which enables the removal of the synthetic additive EDTA. The new synthesis technique improves the throughput of metal-chelating active packaging coatings and enables potential roll-to-roll fabrication of the materials for antioxidant food packaging applications.
LISTENING TO OUR CONSTITUENTS

CIFS-IPP holds a unique position through our interactions with both faculty and industry members. In 2017, after three years in existence, we thought it important to reach out to all of our constituents to hear their perspectives on what was going well and what needed improvement. We listened to our members’ insights at our CIFS-IPP Executive Board meeting in August and conducted two surveys, one with Food Science faculty and one with all CIFS-IPP members.

Consistent across the faculty and our members, we heard constructive feedback to:

- Grow CIFS-IPP by filling gaps in the representation of the food system by new members, such as ingredient-focused companies
- Encourage collaboration among multiple CIFS-IPP members with faculty
- Utilize CIFS-IPP as a point of contact with a focus on the Department of Food Science but with the ability to engage with faculty across campus
- Create benefits which span an industry, such as conducting research on pre-competitive issues
- Implement a CIFS-IPP Steering Committee
- Plan an inaugural All-Member meeting
CIFS-IPP AT A GLANCE

GOLD LEVEL

Beech-Nut®

Wegmans

Dasong Agriculture

Rhéonix®

Gallo Family Vineyards

IFF

International Flavors & Fragrances

PepsiCo

Baldwin Richardson Foods Co.

Marshall Ingredients

SILVER LEVEL

DFA

Land O’ Lakes, Inc.

Campbell’s

Shark Ninja

Ingredion

CHR Hansen

Hood

JBT

General Mills

Agrain Fruit
Baldwin Richardson Foods

“This [partnership] is in alignment with trying to be two steps ahead of our competitors”, said Sharon Webster-Tolin, Senior Director of Marketing and Innovation. She added, “An opportunity to partner with an academic institution helps our company to be future-oriented and continue to stay ahead of emerging technologies, particularly in processing and food safety.” In addition, partnership with Cornell shows Baldwin Richardson Foods’ support of the Upstate New York region and helps the company to find solutions in several areas across the business, including innovation, clean label ingredients, and processing. As the partnership deepens, the company is looking to “tap into the student base more by increasing student engagement and talent development, to provide opportunities for emerging industry leaders, and to continue giving back to Upstate New York.”

Beech-Nut Nutrition Company

Through CIFS-IPP, Beech-Nut Nutrition Company aims to improve its overall capabilities through a relationship with a trusted, technical resource partner. The company also hopes to leverage the Industry Partnership Program as a resource to evaluate modern technologies and to keep Beech-Nut informed on advances in food science. In addition, the company believes Cornell is the right partner to help it achieve its main business goals, including increasing the amount and variety of organic produce available in New York State and engaging in research focused on helping Beech-Nut deliver products to its consumers as close to fresh as possible.
CHR. HANSEN INC.

Cornell and Chr. Hansen have worked together for many years in various areas of research, development, pilot production, and academics, with some Cornell graduates and even faculty joining the team at Chr. Hansen. “An industry partner recommended CIFS-IPP, and when we saw the list of other members, we felt it was a good networking opportunity,” said John Lyne, Chr. Hansen’s director of dairy technology. “We are taking an already strong foundation and enhancing it at the scientific level,” he added.

DAIRY FARMERS OF AMERICA (DFA)

DFA has enjoyed Cornell’s world-class expertise in dairy ingredients, processes, and products, as well as its state-of-the-art laboratories and the Food Processing and Development Laboratory. DFA said “Cornell University staff have both a deep understanding of domestic business development needs and a global perspective on science and technology in the dairy industry. This mix of business savvy and scientific insight presents a unique opportunity for companies in the food industry.”

HP HOOD

“So far, this partnership has been a great addition for us. Cornell’s faculty have actively participated in conceptualizing new projects, presenting solutions, and looking for resources. We are very excited to work with Cornell researchers to develop a summer internship that will allow us to engage with students and, at the same time, give them experience and insights into the industry.” – Mike Suever
**JOHN BEAN TECHNOLOGIES CORPORATION (JBT)**

Cornell has created a platform that attracts people from industry to discuss what’s trending in the food business. For JBT, this collaboration is about developing and sharing with the community our understanding of economic, regulatory, and scientific contexts spanning across the food supply chain.

The year 2016 marked an important milestone in our relationship with Cornell. In moving forward toward our goals to accelerate new product development, grow recurring revenue, execute impact initiatives, and advance our disciplined acquisition program, we enrolled in the CIFS Industry Partnership Program to develop a deeper relationship with the vibrant food systems community at Cornell.

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**PEPSICO**

While we’ve worked on about a dozen different projects together, there are two we’re especially excited about. First, we’re collaborating with Cornell’s Department of Plant Breeding & Genetics to gain a better understanding of the natural variation in nutritional qualities of oats in order to improve new varieties.

Second, we’re working with Cornell’s Department of Animal Science to generate research insights for our European dairy business, Wimm-Bill-Dann. We created a training course and a few years ago, a group of Cornell faculty and staff specializing in Dairy Processing traveled to Moscow, where they conducted a “deep dive” into our dairy operations.
**RHEONIX**

Rheonix, Inc., an Ithaca-based developer of molecular testing technology, is leveraging its CIFS-IPP partnership to validate its breakthrough product for food safety. Rheonix’s Listeria PatternAlert™ assay, launching this summer, will provide a cost-effective method for rapidly pinpointing sources of Listeria contamination in food manufacturing facilities. “We’re thrilled to be working with Dr. Martin Wiedmann, a world-renowned Listeria expert, and his team to validate our Listeria PatternAlert assay,” said Brooke Schwartz, Rheonix Vice President of Strategy and Marketing. “Access to Martin’s premier collection of Listeria strains have helped ensure that our assay will contribute to making food even safer.”

**WEGMANS**

Cornell and Wegmans have partnered for over 40 years to enhance the local economy and shine the spotlight on New York farms. Cornell Professor Robert Gravani has been collaborating with Wegmans since the 1980’s. “We have worked and continue to work together on a variety of important food issues,” says the Department of Food Science professor and director of the National Good Agricultural Practices Program.

Students play a big role in this special partnership as well. As one of the top food retailers in the country, Wegmans recognizes the importance of its current and future employees and offers valuable mentorship to students and young professionals.

“One of the biggest benefits thus far has been open conversation and collaboration with other key food systems stakeholders. Attending CIFS-IPP-sponsored events has put us in touch with other members of industry and encouraged us to identify new opportunities to collaborate. Additionally, our employees have had early opportunities to view or attend CIFS-IPP webcasts and conferences. We have easier access to Cornell expertise for specific projects, like the Artisan Cheese Program, organic seed research, organic farming training, and nutrition initiatives. And, in an exciting development, we have been able to sponsor students from Cornell to work on special projects. The students bring a wealth of knowledge and energy to everything they do!” – Bill Strassburg
GOLD-LEVEL EXECUTIVE BOARD MEETING
Where Innovation and Culture Converge

On August 22, 2017, ten members from nine Gold-Level Member Companies gathered at the Treman Center in Ithaca, NY for a stimulating day of discussions, brainstorming, and shaping the future of the program. Mike Suever of HP Hood and Bill Strassburg of Wegmans both spoke about their organizations’ engagement with the Industry Partnership Program.

Dr. Julie Stafford delivered the State of the Program highlighting the partner, research, and student successes including the six students CIFS-IPP funded for their research projects in the summer of 2017. Read more about these projects on page 12.

Attendees were able to connect with each other and members of the CALS team. Sarah Kennedy of Mann Library gave a rousing presentation on the Research Question Pilot Program. We were able to fulfill eight requests between September and December 2017. You can read more about the program on page 28.

As a result of the meeting, we created the CIFS-IPP Steering Committee consisting of Nick Dokoozlian, Brooke Schwartz, and Sharon Webster-Tolin. We surveyed our members and faculty to encourage their input on the future of our program. Overwhelmingly, we were asked for a chance to interact with members from each company, and out of that request our first All Member Meeting will take place in Ithaca in June 2018.

Pictured below are members of the Gold-Level Executive Committee and the CALS Faculty and staff who attended the meeting in August 2017.
In October 2017, Professor Carmen Moraru, with a grant from the National Institute of Food and Agriculture, hosted the Validation of Nonthermal Technologies Symposium in Ithaca. You can read more about Carmen’s Symposium on page 22. Forty-two CIFS-IPP members from 15 member companies attended the Symposium as a part of their member benefits.

To kick off the symposium, CIFS-IPP hosted a reception in the Gallery of Stocking Hall. Olga Padilla-Zakour, Chair of the Department of Food Science, and Julie Stafford welcomed guests and encouraged all attendees to visit the Campbell Soup Company and Covance tables throughout the evening. Zoe Weiss and David Miller, both graduate students of the Cornell Department of Music, provided music for the evening.
RESEARCH HIGHLIGHTS

Neil Mattson, Associate Professor in the Horticulture Section of the School of Integrative Plant Science, has been awarded a grant through the Innovation at the Nexus of Food Energy and Water (INFEWS) program. The overarching goal of INFEWS is to catalyze integrated, interdisciplinary research efforts to transform scientific understanding of the Food, Energy and Water (FEW) nexus. Controlled Environment Agriculture (CEA), such as greenhouses or plant factories, may provide an alternative to conventional systems of field-based production and long-distance transportation to supply metropolitan areas with locally-grown vegetables. Potential benefits of metro CEA include: decreased transportation of the food, reduced water use compared with field-based production, economic growth, and new jobs and workforce development.

This research project evaluates novel systems to optimize economic benefits, as well as water, energy, and other resource use efficiencies in CEA vegetable production. It fosters industry-research networks and workforce development programs to facilitate the acceptance, adoption, and continued improvement of viable CEA systems in metropolitan areas. Collectively, the project 1) Lays the groundwork for more sustainable FEW systems exemplified by CEA and vegetable production; 2) Provides knowledge and insights to enable informed decision-making by policy makers, city planners, entrepreneurs, and current CEA operations; and 3) Develops education resources to train an appropriate workforce for a growing CEA industry.

In October 2017, Cornell University hosted the international symposium “Validation of Nonthermal Technologies.” The symposium addressed critical issues related to the validation of nonthermal processing methods to ensure compliance with regulatory requirements. With a total of 159 registered participants, the symposium was diverse and well attended representing 59 companies, 18 universities and 6 regulatory or research institutions from around the globe.
Jenny Scott, Senior Adviser at the Center for Food Safety and Nutrition (US-FDA), delivered the keynote address “Validation of novel processing methods for microbial inactivation to ensure compliance with the FSMA preventive controls requirements.” The program featured presentations on High Pressure Processing, Pulsed Electric Field, light-based treatments, cold plasma, and irradiation with a particular focus on the challenges and best practices related to the validation and adoption of nonthermal technologies for microbial inactivation. A round table discussion on the second day brought together industry and regulatory representatives and allowed the symposium attendees to share their experiences in validation, commercial applications and inspection of nonthermal technologies. The event culminated in a visit to the Cornell Department of Food Science HPP Validation Center in Geneva, New York. Carmen Moraru and representatives from Hiperbaric, DIL and BEEI generously provided demonstrations of pilot and small commercial scale equipment for high pressure processing, pulsed electric field, high-pressure homogenization, and UV processing.

The symposium was funded by a grant from the United States Department of Agriculture with contributions from the Cornell Institute for Food Systems Industry Partnership Program and the NY Association for Food Protection. The Nonthermal Processing Division of the Institute of Food Technologists (IFT) and the European Federation of Food Science and Technology (EFFoST) supported the symposium as well.

Information will be made available to policy planners and entrepreneurs to assess the environmental impacts and financial feasibility of metro-based CEA adoption. With metro-area residents not necessarily prepared for careers in agriculture, the project identifies workforce needs and creates several structured workforce development opportunities (i.e. curricula, short courses, and internships). It is anticipated that the research results from this project will be highly transferrable to many regions in the U.S. and elsewhere around the world.

The Cornell Institute for Food Systems, in conjunction with the Cornell University Agricultural Experiment Station, provided initial planning grant support to Professor Mattson and his team of collaborators.
NEW FACULTY

CHRIS LOSS
Louis Pasteur Lecturer in Food Science
Department of Food Science

Academic focus
Food Safety, Food Analysis, Culinary Science, Flavor Perception

Previous positions
Director of Menu Research and Flavor Discovery Initiative, Culinary Institute of America (2008-2016)
Professor of Culinary Science, Culinary Institute of America (2011-2016)
Extension Associate, Cornell Food Venture Center @NYC (2017-2018)

Academic background
A.O.S Culinary Arts (Culinary Institute of America, ’93)
B.S. (’96), M.S. (’01), Ph.D. (’06) Food Science (Cornell)

In his own time
Spending time with family, cooking, gardening, fishing
What sparked your interest in food science?

The culinary arts – While I was in culinary school, I took a class called “Fish Cookery.” It was one of the more stressful classes in the school that was taught by an older and very strict chef, an army veteran. As a student who frequently asked questions, I once asked him to explain a mechanism underlying fish preservation and his response was to give me an assignment to write an essay on the subject. So, after class, I went off to the library and read an article on fish preservation by Dr. Joe Regenstein, an Emeritus professor here in the department. His work introduced me to different concepts in food science and really sparked my interest in the subject. Having more questions, I contacted Dr. Regenstein directly with further questions I still had about fish preservation and our correspondence got me even more excited and curious about the field of food science.

What aspects of food science should those in the culinary world keep in mind?

First and foremost, food safety is always important. Next, I would say ingredient functionality as it helps chefs look at ingredients and understand what else they could do with it. Also, it’s important to understand how the energy you put into food (i.e. heat, chemical) can change or augment the food’s functionality and create more delicious and sustainable food. I think chefs should also make an effort to better understand the field of sensory science and perception. In many ways chefs have a great understanding of how to create “deliciousness”, but the psychology and perceptual mechanism underlying it is less clear. Actually, this is an area where both chefs and scientists can really benefit from genuine transdisciplinary collaboration.

How has your culinary background influenced your approach to food science?

My culinary background has taught me to always think of putting food and the problems we encounter in the kitchen into context. Chefs are, for the most part, empiricists—learning about their medium (i.e. ingredients and their functional properties, tools and techniques, and people) through their senses, observation, and reflection on tradition. In many ways this parallels how scientists work and develop new knowledge. But the culinary professional differs from the Food Scientist in that chefs always emphasizes the experience people have with their food and how flavors are “harmonious.” I have come to appreciate the importance in balancing the reductive way we look at food as a scientist with the contextual, real-world perspective of a chef.

How has your first year teaching at Cornell been so far?

It felt great to back and everyone made me feel very welcomed and comfortable! I was teaching at the CIA but the environment was very different. The curriculum was a hybrid – every class had a cooking lab aspect. Coming back to food science labs, it was wonderful to see all the analytical equipment and the amazing resources we have here. Cornell students are just so impressive—motivated, with excellent analytical skills and so much curiosity. They genuinely want to understand what’s going on. Other scientists and educators have emphasized (and I agree), that the essential ingredient to learning is curiosity, without that it is hard to see the patterns and incongruities in the world around us, which is critical to identifying useful questions and figuring out ways to solve problems.
SPECIAL RECOGNITION

BURT FLICKINGER III

Burt Flickinger III of Strategic Resource Group provided the Industry Partnership Program with an unrestricted donation this year, which helped us hold the Winter Tastemakers Gathering in January 2018. CIFS-IPP is grateful for Burt’s support of our vision and for making new ways of engaging possible.

Burt has been a long-time supporter of Cornell University and an avid fan of the Cornell Men’s and Women’s Hockey teams. His company, SRG, is a leading consulting firm in the U.S. retail and consumer goods sectors.

BILL SMALL

Bill Small, Engineering Senior Manager at PepsiCo, helped to facilitate the donation of a Pulsed Electric Field (or PEF) System by Diversified Technologies to the New York State Experimental Station in Geneva, NY. The PEF System located within the Fruit and Vegetable Processing Pilot Plant will allow for the validation and preservation of new and emerging foods.

The pilot plant is currently undergoing renovations and will open in the summer of 2018 with a range of novel, non-thermal processing equipment. These advanced technologies join the High Pressure Processing facility, which opened in February 2017 and has been busy ever since. We thank the State of New York and our industry supporters Hiperbaric, Wegmans Food Markets, LiDestri Food & Drink, and Suja Juice for their contributions to making the HPP facility possible.
During the fall semester of 2017, the Albert R. Mann Library and CIFS-IPP created a research-question pilot program for CIFS-IPP member companies. The program allows member companies to pose questions to the Mann Library team with the objective of providing members with access to the library’s comprehensive research capabilities.

The pilot program has been met with great enthusiasm. More than eight research questions from multiple companies have been investigated. The Mann Library team generates a detailed bibliography, including a list of citations as well as relevant excerpts from books, chapters, article abstracts and other electronic sources. The Mann Library team has been a reliable, creative, and performance-oriented partner in providing this new offering to CIFS-IPP members. The reports generated by this program provide prompt, useful information to members and open another opportunity to engage with company representatives in a meaningful way. Thank you, Mann Library!
Through CIFS-IPP, we strive to foster solution-oriented scientific discoveries in conjunction with advanced technologies and strategies that will lead to a safer, more nutritious, and more accessible global food supply. One connection around campus that we have cultivated this past year is Cornell Dining. We believe this relationship will have implications for meeting the needs of food systems and the global food industry in the future.

Chef Steven Miller, Director of Culinary Operations at Cornell Dining, joined us for the Winter Tastemaker’s Gathering and spoke to attendees on chef chemistry and sustainability. Chef Miller and Michele Lefebvre, Registered Dietician Nutritionist and Director of Nutrition Management, work closely as a team and provide combined expertise in ingredient sourcing, culinary skills, and foodservice. They have established quality standards for food manufacturers to adhere to, and they lead the campus dining space in clean label changes. Whether or not we seek to join in on these efforts to produce fresher foods or foods with greater nutritional value, the day-to-day experiences of this award-winning foodservice here on the Cornell Ithaca campus is likely to bring a new dimension to potential opportunities for CIFS-IPP members.
On April 28, 2017, Julie Stafford, Industry Liaison for the CIFS Industry Partnership Program, moderated a diverse panel with:

Frank Cavallaro, Vice President for Business Development, LiDestri Food and Beverage,

Chris Kirby ’15, Founder of Ithaca Cold Crafted,

Ian Gaffney, Co-Founder of Emmy’s Organics,

and Trystan Sandvoss, Co-Founder of First Light Farms and Creamery.

“The food and beverage category can be a crowded and competitive place,” Stafford said. “We are seeing that it is no longer small companies versus large companies; instead, it is small and large companies working together, especially when the smaller companies realize success and must scale up to meet increasing demand.”

Chris Kirby ’15 founded Ithaca Cold Crafted (Ithaca Hummus) and spent hours handing out samples in front of the Ithaca Wegmans. Kirby used the customer feedback gathered outside their store to present his product to the Wegmans team. The product can now be found in Wegmans and Whole Foods Stores.

“It’s an exciting time to be in the food industry,” said Stafford. “As I see from our CIFS-IPP members, today’s food companies continue to be challenged to create higher quality, healthier, more sustainable options and often look to food science and technology for solutions.”
The Business of Food theme is an initiative in the Cornell SC Johnson College of Business connecting faculty, students, alumni, and industry leaders engaged in the sustainable production, processing, selling, and management of food and beverage products. This theme connects the Dyson School, the School of Hotel Administration, SC Johnson College of Business, and the College of Agriculture and Life Sciences. Under the co-direction of Miguel Gómez from the Dyson School and Alex Susskind from the School of Hotel Administration, Julie Stafford of CIFS-IPP is leading the Engagement Committee, which has been established to guide teaching, research and engagement. Through this initiative, the vision is to create a powerfully distinct identity for the College of Business’ role in sustainably feeding the world. CIFS-IPP members will benefit from the college’s role in and the thoughtful leadership of this Business of Food initiative.