

## Caryopsis Student Newsletter – Winter/Spring 2020

### Greetings to all student members of the Cereals & Grains Association!



With a new year comes new beginnings. Our organization officially changed names from AACC International to the **Cereals & Grains Association** this past fall 2019. With this new name also comes expanded opportunities that build upon the previous community and resources that were already established. Not only are there changes in our overall organization, but there are also new and exciting changes ahead for our Cereals & Grains Student Association. I am most honored to serve as this year's Chair of the Student Association, heading a passionate, highly skilled, and ambitious group of student leaders. We will be keeping you all updated as the year progresses. I look forward to our continued success!

As for a little about myself, I am a PhD candidate under the advisement of Dr. Bruce Hamaker in the Department of Food Science at Purdue University. Thus far my research has focused on investigating the slow digestion and satiety properties of pearl millet grown in sub-Saharan Africa as well as exploring the implications of starch fine structural features on digestibility and texture applications through collaborative projects. Ultimately, my work will help identify characteristics of glycemic carbohydrates that impart a slow digestion property and elucidate how they can be leveraged to design foods with targeted physiological outcomes. Before graduate school, I received dual bachelor's degrees in Food and Nutrition Science as well as Spanish from St. Catherine University in St. Paul, MN. In my free time, I enjoy being outdoors, music, and traveling.

As in previous years, at last year's Cereals & Grains 19 annual meeting in Denver, Colorado we had the Product Development Competition, Best Student Research Paper Competition, Student Social, and numerous poster and oral presentations by students from all over the world. At the upcoming Cereals & Grains 20, we will continue to have these events – the **Product Development Competition** (re-vamped!), **Best Student Research Paper Competition**, **Student Social**, **poster and oral presentations** – *plus more events and activities to be announced!* I would also like to remind you that we will also have a **student meeting**, which you are all welcome to attend, and we are hoping to host a **silent auction** and a **professional development event** geared toward students. We continue striving to increase student membership, engagement, and input in the Cereals & Grains Association. We always welcome volunteers to represent their university and actively participate in the Student Association.

**As students, we are the future of the Cereals & Grains Association.** Join your colleagues as student leaders and be a part of something great! If you are interested in getting involved, please don't hesitate to reach out to me ([hayes100@purdue.edu](mailto:hayes100@purdue.edu)) or any of the other [student leaders](#). Follow us on [Facebook](#) or [Twitter](#) to stay informed about our activities and hot topics in cereals and grains. Keep an eye out for more emails and communication from us throughout the year. I hope to see you all in October at Cereals & Grains 20 in Calgary, Alberta, Canada!

**-Anna Hayes, 2019-2020 Student Association Chair**

### **Vice Chair: Harrison Helmick**



Harrison Helmick is a Master's student in the department of Food Science at Purdue University under the guidance of Dr. Jozef Kokini. His research has focused on how yeast metabolites impact wheat dough rheology, and he hopes to build on novel techniques for visualization of gliadin and glutenin in order to observe how these proteins move and change throughout fermentation in wheat dough products. This research will hopefully lead to better understanding of dough chemistry during fermentation. Prior to Purdue University, Harrison studied at Kansas State University and obtained a degree in Bakery Science. This turned into a career at Bimbo Bakeries where he worked in production and process improvement. He hopes to continue to blend lean six sigma practices with the fundamentals of food science in order to advance the world of cereal science. He is excited to be involved with the scientific community of cereals and grains.

### **Product Development Competition Chair: Ana Magallanes López**



Ana is a Cereal Science Ph.D. student in the Department of Plant Sciences at North Dakota State University (NDSU). She is under the advice of Dr. Senay Simsek. Ana majored in Agro-Industrial Engineering from Chapingo Autonomous University in Mexico in 2015. She continued her education at NDSU, where she earned her Master's degree in Cereal Science in 2018, working with wet milling on deoxynivalenol contaminated wheat to obtain safe and valuable food ingredients. For her Ph.D. she is focusing on the evaluation of immunomodulatory properties of bean soluble dietary fiber using cell models derived from human intestinal cells. In her free time, Ana enjoys meeting with friends, watching movies and trying different cuisines. Regarding the AACCI (now Cereals & Grains) annual meetings, she has presented her research with posters at the 2017 meeting in San Diego, CA. and at the 2019 meeting in Denver, CO. In 2018, she was awarded second place in the Best Student Research Paper Competition during the annual meeting in London, UK. Ana has been actively involved with the Cereals & Grains Student Association, working as the Product Development Competition Vice-chair in 2019. She is honored and excited to continue being part of the Cereals & Grains Student Association, spreading the word to encourage more student participation.

### **Product Development Competition Co-Vice-Chair: Jayani Maddakandage Dona**



Jayani is a Master's student in Cereal science program at North Dakota State University and is advised by Dr Senay Simsek. She works on kernel, flour, pasting properties and baking quality of hulled wheat species. Jayani is also working on dietary fiber variation of hulled wheat flour and bread. She participated in the 2019 Student Product Development Competition at Cereals and Grains 19 representing North Dakota State University and was awarded second place. She is excited to be serving as the Product Development Competition Vice-Chair.

### **Product Development Competition Co-Vice-Chair: Edil Vidal Torres**



I am Food Technologist Technician in the Department of Plant Sciences at North Dakota State University in Dr. Senay Simsek's wheat quality lab. I am originally from the Dominican Republic and completed my Master's degree in Food Science and Technology at the University of Puerto Rico Mayaguez Campus. My research focused on characterization of two alternative crops Quinoa and Amaranth. I was an intern student in Dr. Simsek's lab during the summer of 2018 where I completed most of my research analysis. 2019 was my first year participating in the AACCI (Cereals & Grains) annual meetings, I presented two posters at the 2019 meeting in Denver, Colorado. It is a privilege to me to be part of the Cereals & Grains Student Association and collaborate with the team as the Product Development Competition Vice-Chair.

### **Fundraising Chair: Sarah Corwin RD, LD**



Sarah is currently a Ph.D. candidate (estimated graduation August 2020) in the Department of Food Science at Purdue University under the advisement of Dr. Bruce Hamaker. Sarah studies how novel carbohydrates are digested by native small intestinal enzymes on a molecular level. She is studying linkage type and combination, and molecular size and conformation on digestion rates through in-vitro and in-vivo studies. Her work will ultimately elucidate what molecular characteristics make up slow-digesting carbohydrates, for use in foods for diabetics and obese, as well as appetite control. She obtained her undergraduate degree from Case Western Reserve University in Nutrition and Dietetics, and practices as a clinical dietitian in addition to studying food science.

### **Online Communicator: Serap Vatansever**



Serap is a Ph.D. Candidate in the Department of Plant Sciences for the Cereal Science Graduate Program at North Dakota State University under the advisement of Dr. Clifford Hall. Her research has focused on improving sensory attributes of pea flour using green technology, Supercritical Fluid Extraction (SFE), as well as exploring the implications of this technology on techno-functionality of pea protein isolate and on pea starch fine structural features. Eventually, her research will help determine the feasibility of the optimized SFE system to enhance the utilization of pulse ingredients in the food system through flavor modification. During her doctoral program, Serap was also a graduate intern for a malt equipment company and pulse ingredient company to research on malting process for different grains, and texturized pulse proteins and gluten-free pasta, respectively. Serap earned her B.S. degree as valedictorian in the Department of Food Engineering from Pamukkale University, Turkey and was also an exchange student for two semesters in the Department of Food Science and Technology at the University of Helsinki, Finland. Thereafter, she received her M.S. degree in Food Microbiology and Biotechnology from Pamukkale University, and then, worked for ~ 3 years at the National Bank in Turkey. Serap likes arranging social events, volunteering for food science related associations and education

based non-profit organizations, tasting local specialty cheeses and drinks, and traveling. She is both honored and excited to serve as an online communicator of the Cereals & Grains Student Association.

### **University Representative (University of Nebraska-Lincoln): José Rodrigo Mendoza**



Rodrigo is a Ph.D. Candidate majoring in Food Science & Technology and minoring in Agronomy/Plant pathology at the University of Nebraska-Lincoln, under the advisement of Dr. Andréia Bianchini and Dr. Jayne Stratton. His interests include food safety and food quality of cereal and cereal based products. Rodrigo's research encompasses multiple aspects of corn storage and pathology, focusing broadly on limiting post-harvest loss of corn to insects, molds and mycotoxins in developing nations; focus countries include Guatemala, Nepal and Honduras. Rodrigo received a B.S. in Food Engineering from Universidad del Valle de Guatemala (UVG). After completion of his Master's in Food Science & Technology (UNL), he transitioned to the Ph.D. program in same department. Rodrigo is excited to be serving as a Cereals & Grains Student Liaison this year, involving young minds in the cereal science world.

### **Student Representative - Europe: Ali Göncü**



I am currently a Ph.D. student in the Department of Food Engineering at Pamukkale University, Turkey under the advisement of Dr. İlyas Çelik. At the same time, I am a lecturer in the Department of Food Processing at Çine Vocational School, Aydın Adnan Menderes University, Turkey. My research has focused on investigating gluten-free product development, non-alcoholic cereal beverages and traditional sourdough products such as tarhana and their qualities (viscosity, rheology, physicochemical, morphology and microbiological properties). I also earned my B.Sc. degree in Food Engineering from Pamukkale University, Turkey. I graduated with my M.Sc. in Cereal Science, focusing on determining the quality of baked wheat chips made from adding different cereal flours in the Department of Food Engineering from Erciyes University, Turkey. I like watching series and reading some magazine of travel. I enjoy travelling, and I am interested in aviation such as hot air balloon, paragliding, wingsuit jumping. I am honored to join the Cereals & Grains Student Association and I am excited to be working as the Europe Representative.



### **Student Representative - USA/North America: Michelle Oppong Siaw**



I am a Ph.D. student in the Department of Food Science at University of Arkansas under the advisement of Dr Ya-Jane Wang. I am working on how to apply a material science approach to improve rice processing performance. The rice industry experiences high economic losses due to rice breakage during milling. This research hopes to address the issue by researching certain micro- structural defects in the rice grain which might be causing these breakages. The ultimate goal of this study is to help build a more sustainable rice industry by reducing waste and improving the economic value of rice. I earned my undergraduate degree in Food Science and Technology from the Kwame Nkrumah University of Science and Technology in Ghana. Later I obtained my MPhil degree in the same university. My hobbies are reading and watching movies. I am honored to serve as the Cereals & Grains Student Representative for USA/North America.

### **Student Representative - Canada/North America: Elyssa Chan**



Elyssa is a M.Sc. student in the Department of Food and Human Nutritional Sciences at the University of Manitoba. Her program is in Food Science and she is under the advisement of Dr. Filiz Koxsel. Her research focuses on developing low moisture pea protein based texturized vegetable protein (TVP), using extrusion technology. Furthermore, she will analyze the TVP's techno-functional and physical properties to determine its suitability as a meat extender in an animal protein-based patty. Elyssa obtained her undergraduate degree from the University of Manitoba in Food Science with a minor in Business Management.

### **Secretary-Treasurer: Supun Fernando**



Supun is a Ph.D. candidate in Department of Plant Sciences at North Dakota State University under the supervision of Dr. Frank Manthey. His research is focused on dry bean milling & flour functionality. He finished his B.Sc in Food Science and technology from University of Sri Jayewardenepura, Sri Lanka and M.S. from North Dakota State University. He has been an active member and a volunteer in the Student Association since 2016 as the product development competition vice chair and the online communicator. He is excited to serve the Student Association again as the Secretary-Treasurer for the 2019/2020 year.

## **Student Product Development Competition**

The Student Association Product Development Competition (PDC) is organized by students and sponsored by Cereals & Grains Association corporate member organizations. The PDC provides a great opportunity for students to apply knowledge and skills learned in the classroom to create food products for the real world.

**\*New this year: the PDC has a theme!**

The theme for the 2020 PDC is “Value Added Products from Food Waste”.

### Schedule\*

- By **April 7** - Complete and submit the [Intent to Enter Form](#)
- By **June 2** - Submit Product Report
- By **July 15** - Finalists notified. All teams receive feedback on their products
- **October 25-27** - Finalists will participate in the final competition taking place at the Cereals & Grains annual meeting

\*Shown for reference. Subject to change.

For more details on eligibility and awards, please click [Student Product Development Competition](#).

## **Best Student Research Paper Competition**

The Cereals & Grains Professional Development Panel is hosting the 12th Annual Best Student Research Paper Competition to be held at the 2020 AACCI Annual Meeting. The competition will be judged in two stages. The AACCI Best Student Research Paper Competition jury will review the nomination forms, abstracts, and initial presentations. Based on the judge’s scores, students will be chosen to participate in the competition taking place at Cereals & Grains 20 meeting in Calgary, Alberta, Canada. October 25-27, 2020. For more information, please click [Cereal & Grains 20](#).

### **Important dates**

April 7–9, 2020 - 124th Annual IAOM, International Association of Operative Millers, Conference & Expo

July 12–15, 2020 - Institute of Food Technologists Annual Meeting and Food Expo

### **We are on Facebook and Twitter!**

We are on Facebook and Twitter! Be sure to like or follow us to stay up to date with current happenings for the Cereals & Grains Student Association and to learn fun facts about cereal science. If there is something you would like to announce or see happen within the Student Association, please feel free to share it with us on either [Facebook](#) or [Twitter](#).