Greetings from the Chair

To our Food Science Alumni, Friends and Family,

Stay at home....
Wear a mask....
If you feel sick....
If you develop a cough....

These and a host of other like-minded words and directions have predominated our lives beginning for us mid-semester, Spring, 2020. The COVID-19 pandemic, unlike any other event most of us have experienced in recent history, worked to transform Babcock Hall from a vibrant learning community of in-person labs and meetings and lectures to a nearly empty building. Routine instruction and associated activities assumed a new form of video conferencing and web-based technologies to manage the balance of the semester. While this was far from ideal, we note with much gratitude the efforts from all – students, instructors and staff – to meet these challenges in a constructive and positive manner. Even as state and campus restrictions begin to loosen, there is an overarching sense that much of the world, especially higher education, will continue to be affected by what transpired in 2020.

As we continue to prepare for the upcoming academic year, we are faced with designing improved online lecture content, lab experiences, office hours, advising and research mentoring, and a host of other activities with a new list of challenges to limit contagion. Yet, there is also an overarching sense of ambition and optimism that the department, the college and campus will thoughtfully meet these challenges and design systems and experiences that are even better than what existed in the past. Indeed, the spirit, energy and capacity of the department remain as vibrant as ever and we remain fixed in our determination to provide a globally important education – one fixed on teaching the principles that dictate the provision of food.

With warm regards and

On Wisconsin!

Scott A. Rankin
Professor and Chair
New Faces in Babcock Hall

Emily Daw joined the department as director of our Frozen Dessert Center in February of 2020. While COVID-19 disrupted her work after only one month, Emily’s expertise and enthusiasm is clearly a valued asset for the Center. Emily earned her bachelor’s degree in Food Science at Brigham Young University. She then joined Dr. Rich Hartel’s lab where she studied high protein ice cream; earning her Master’s degree in 2013. As director of the Frozen Dessert Center, Emily’s primary responsibility is to oversee research and development programs that help companies create new or improve existing products. Programming includes a wide range of analytical tests that help companies better understand the microstructure of their products. In addition to working with the industry, Emily supports our undergraduate program by training students on analytics and providing support for Product Development projects. Emily works in collaboration with Drs. Scott Rankin and Rich Hartel. She brings valuable expertise gleaned from six years of experience with Schep’s ice cream where she worked as a research and development manager. We are excited to welcome Emily to Babcock Hall!

The Department of Food Science is excited to welcome Audrey Girard to our faculty as she assumes a position as food chemist. Dr. Girard joins us from the Department of Soil and Crop Sciences at Texas A&M where she is an Associate Research Scientist. Dr. Girard earned her Ph.D. from Texas A&M in 2018. Dr. Girard will begin her research and teaching position in August. Watch for a full article about her in the fall edition of IMPACT.
COVID-19: A Creative Conversion to Off-Site Instruction and Research

A Department Perspective

One of our thematic messages for this newsletter is IMPACT. Our intent is to convey the impact that we as faculty, staff, and students make, especially in the spirit of the Wisconsin Idea. The arrival of COVID-19 placed a whole new and unprecedented spin on the concept of impact.

On March 12th the Chancellor’s office announced that campus would convert to remote instruction by the time students returned from spring break on Monday March 23rd. At the time we were teaching six of our core courses including those with labs such as FS 301, 324, 410 and 532. We could share countless stories about how we converted face-to-face instruction to remote delivery in roughly 11 days. We could share even more stories about what it is like to sustain excellence week after week using remote teaching technologies. At the end of the day, however, what matters is the impact this rapid conversion had on our students. The following stories provide graduate and undergraduate perspectives.

An Undergraduate Perspective

-Zoe Atkins (Sophomore)

As tragic as this event is, it gave my family the unexpected gift of time together before my brother’s graduation and the start of his military service (he won't get very many vacation days). However, being at home with everyone changed my priorities. I decided to spend less time studying and more time with the people around me. If the Covid-19 situation hadn’t caused me to come home, I’m confident I would have performed better in my classes, but I don’t regret my decisions. The situation also cancelled events - some of which meant a lot to the people finishing their undergraduate education. We didn’t get to say a formal goodbye to so many seniors who deserved some recognition after devoting their energy to making everyone else’s experience at UW better.

My courses were transitioned to online structure pretty well. Not surprisingly, some turned out better than others: Ballroom 101 was definitely not the same. Overall, expectations of students seemed to be lower, but core learning requirements stayed the same. Lectures that went online to an interactive format often functioned better - I think because students were able to carefully word their questions and didn’t have to feel as self-conscious asking them because they couldn’t be seen by or see any of their peers. More questions from each other helped us all learn the material better.
Our Response to COVID-19

An Undergraduate Perspective Cont.

The Food Science department reacted kindly. They recognized which assignments and activities students would benefit from going online and discarded the others. For example, FS 301 changed our in-person labs into different research labs rather than trying to force the same format. The Food Science Department also found a way to preserve some of the fun of spring semester and the traditional formal farewell to seniors with the Wine and Cheese event. The general attitude that came from the department was understanding and caring toward the health, well-being, and success of their students. I was happy to belong with them.

A Graduate Perspective

-Shenwei Zhang (Graduate student)

It’s been almost two months since I quit the lab and work from home. I still remember when I first learned that we are going to suspend the lab work in early March, I was a little bit disappointed since I just got back from my maternity leave. My experiments were at a very exciting stage and I’ve got a long experiment to-do list waiting ahead for me to accomplish. Anyway, that is just really bad timing. However, we all know at home. I am not going to lie that the first two weeks of working from home life was a mess. The biggest challenge for me is to deal with constant interruptions—my six-month-old baby—at home while finishing the course work and keeping my research going in a completely different manner. Luckily, I got in time advice and help both from my mentor and my family that allow me to quickly adjust myself to adapt to this new setting. I changed the focus of my work from bench to computer. I spent more time reviewing literature, outlining my next paper, and planning for upcoming experiments. To avoid frequent interruptions while working at home, I found that noise-canceling headphones and clear labor division is very useful in my case. They ensure the quantity and quality of my every day working hours. Other tips I found that are really helpful to stay mentally healthy while being productive at home are: #1 Having a to-do list and prioritizing work. I always write myself a small note on what I want to accomplish every day. #2 Stay connected. We have a web lab meeting every two weeks just to check in how is everyone doing at home. #3 Stay active. Having a workout into my daily routine is probably one of the most effective ways to keep myself motivated, energetic, and be more concentrated during the work. I hope we can gather together soon in the Babock after all of this is over! Go badgers!
Research Spotlight
Assistant Professor Tu-Anh Huynh: Examining Listeria Present in Food

Tu-Anh Huynh is an assistant professor in the Food Science department – University of Wisconsin Madison. The Huynh lab is interested in the various ways that Listeria monocytogenes (Listeria), a prominent foodborne pathogen, adapts its lifestyles to thrive in so many food products and cause serious infections in humans. In fact, Listeria is remarkably successful as a foodborne pathogen. Because it is ubiquitously present in the soil and farm environments, it easily contaminates the food production chain, forms biofilms on food processing equipment and can survive for years without losing the ability to cause illness. Upon infecting humans, Listeria can spread to many organs in the human body, causing a mortality rate of almost 20%, much higher than most common foodborne pathogens.

To understand the transmission cycle of Listeria from farm to fork, the Huynh lab sampled dairy cows for this pathogen, and found it to be shed by most animals. However, Listeria isolates from dairy farms are genetically heterogeneous, and some appear better adapted to grow in the environment, whereas some others are better at causing infections. The lab is now trying to understand the genetic factors responsible for these differences, in an effort to develop a source tracking tool for Listeria outbreaks.

The high adaptability of Listeria stems from its ability to sense the environments and reprogram cellular pathways accordingly. During growth, Listeria produces an essential molecule, called cyclic-di-AMP, and depends on it for survival as well as adaptation. Stress conditions, such as antibiotics or sanitizing reagents, alter cyclic-di-AMP levels in Listeria, which in turn modifies the activities of many important proteins. The lab found that Listeria is severely compromised for growth, stress response, and pathogenicity both when c-di-AMP is depleted and when it accumulates to high levels. They are trying to elucidate the cellular pathways responsible for these deleterious effects. They are also searching for natural and synthetic compounds that disrupts c-di-AMP homeostasis, since those compounds will be extremely useful in preventing Listeria growth in foods and treating infections in humans.
Elizabeth (Liz) James assumes leadership roles for the department and our campus community. 
As a rising junior in our undergraduate program, Liz James emerged as a notable scholar and leader. She is a scholarship recipient, student representative for our Undergraduate Program Committee (UPC) and the in-coming assistant director for the Frozen Meal Program (FMP): a grant funded program the department manages in partnership with UW Housing. We recently “sat down” (virtually) with Liz to reflect on her interests and goals for leadership involvement.

Why did you choose to major in Food Science?
I chose Food Science as my major because, ever since a young age, I’ve had an interest in food, probably because of the ridiculous amount of Food Network I watched! It’s always been something that I found interesting and makes me happy. My ultimate goal in life is to have a job that I can look forward to everyday so I hope Food Science will help me achieve that.

What is it about serving as a student leader in the FMP and UPC that most interests and excites you?
I’m very excited to be a student leader in the FMP and UPC because I get to be more involved not only on campus, but within the Food Science department. I spent two semesters with UW Slow Food and I really enjoyed getting to see something that our team created be enjoyed by various members of the Madison community. I hope to be able to continue that experience through the FMP and UPC.

What do you like most about Food Science?
One of my favorite parts of Food Science is how hands-on it allows students to be. I’ve always enjoyed learning from real life experience and Food Science has tons of opportunities to gain that experience whether it be the labs we do in classes, working in a lab on campus, or being part of Product Development team. I’ve also met so many awesome people through Food Science that make me look forward to classes and so many other events!
Wine & Cheese Social Goes Virtual

Despite the social barriers we faced this semester, the tradition of our annual Wine and Cheese Social was still a success via a Zoom call! Well over 30 faculty, staff and students joined in on the fun. A list of specific cheeses and wines was provided ahead of time and each participant made their own cheese platter and wine selections. If you missed pairing out on the social and want to try your own version, take a look at the pairings below. Without a doubt, we look forward to this event each Spring and are so pleased we kept this tradition going. Until next year’s Wine and Cheese Social, Cheers!

| WINE | CHEESE | OTHER FOOD? | NOTES | SEARCHING FOR SOMETHING BUT DON’T WANT TO SPEND A LOT? THE SOCIAL SOURCERS AND MICHAEL SUGGEST!
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<tr>
<td>RIESLING</td>
<td>Blue cheese and Pesto</td>
<td>Buffalo Chicken pizza; Tacos, mini cheese quesadillas</td>
<td>Sweet White wine</td>
<td>Pinot Noir (75), Riesling (55), Laz Menashe Vidalarch (59.25)</td>
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<td>CHARDONNAY</td>
<td>Graywolfe, Line</td>
<td>Pasta, potato, broccoli, brussel sprouts</td>
<td>White wine</td>
<td>A by Arboleya (58), Thibaut (56), Kelderman (65), Zinfandel (57)</td>
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<tr>
<td>PINOT GRIGIO</td>
<td>Italian Montalbano, Cheese</td>
<td>Pasta, potato, broccoli, brussel sprouts</td>
<td>White wine</td>
<td>Twisted (58), Woodbridge (57), Kelderman Signature (55), Bodegas (65)</td>
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<tr>
<td>SAUVIGNON BLANC</td>
<td>Goat cheese</td>
<td>Fish, shellfish, green vegetables</td>
<td>White wine</td>
<td>Kids (77), Lodi, Member’s Mark (59), Malwood (55)</td>
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<td>ZINFANDEL</td>
<td>From cheddar</td>
<td>Roasted chicken or pork, or a light Thai basil meat</td>
<td>White wine</td>
<td>Big Basin Reserve (68), Chateau Cellars Purple Paradise (53)</td>
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<td>MOSCATO</td>
<td>Soft cheeses like Brie and Camembert</td>
<td>Chicken, light salads, fish, chicken, fruit, fresh salads</td>
<td>Sweet White wine</td>
<td>Cusco (50), Cava (57), Barile (56)</td>
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<td>SPARKLING GRAPE JUICE</td>
<td>American cheese, Velveeta</td>
<td>Grilled cheese, Goldfish crackers</td>
<td>Vegan Mimosa</td>
<td>Welch’s (59), Market Street’s Sparkling Cider (54)</td>
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<td>PORT</td>
<td>Blue cheese, aged cheddar</td>
<td>Chocolate cake, cookies, potato chips, cheddar</td>
<td>Red Wine</td>
<td>Old Forester Port (51), Sandeman Fine Sherry (52)</td>
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<td>SYRUP</td>
<td>Spanish Manchego</td>
<td>Smoked meatloaf (Beef Jerky), brussel</td>
<td>Red Wine</td>
<td>Oak gruve (50), J.J. Cider Co (20)</td>
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<td>CHORIZO</td>
<td>Mild pork, chorizo, and sausage</td>
<td>Biscuit, or a meaty bratwurst (Serve with honey, no mustard)</td>
<td>Red Wine</td>
<td>La Vielle Flamme Rouge (54), Chateau du Vieux Marche Red (32)</td>
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Norman F. Olson died on May 10, 2020. He was born in Edmund, Wisconsin on February 8, 1931, the son of the late Irving and Elva Olson. He served in the United States Army as a lieutenant from 1953-55. Following his military service, he obtained a Ph.D. at the University of Wisconsin, Madison in 1959. The next 40 years were spent as a professor in the Food Science Department at the University of Wisconsin. His research focused on the chemistry, microbiology, and technology of cheese products, food fermentation and microbial metabolism in foods. He served as a reviewer of research papers for several scientific journals. In 1975, he was awarded a Fulbright Scholarship at the Università Cattolica del Sacro Cuore in Piacenza, Italy. Norman was instrumental in organizing the Center for Dairy Research at the University of Wisconsin and served as its first Director from 1985-1993. It is the first and largest Center in the nation that focuses on dairy research. Norman is survived by his wife Darlene; the two were married in 1957. He is survived by two children, Kristin (Richard) Bransford; Eric Olson, and three grandchildren, Daniel and Sarah Bransford, and Anika Olson. Norman was a great member of the Food Science Department, and we are grateful for his many contributions.
Congratulations to the Class of 2020!

The department congratulates these students on their successful completion of the Food Science undergraduate program. We wish them the very best and welcome them to our alumni family.

Sean Baker       Anna Johnson       Ryan Marlega       Yesha Shah
Aileen Barretto  Nigel Kang        Brooke Moore        Spring Spaeth
Janice Cheng     Nathan Kerner      William Northway    Bonnie Sun
Ricky Chubaty    Peter Krause       Michael O'Connell  Vanessa Villasenor
Edrik Engberg    Nick Kropiwka      Jessica Pawula      Holly Wang
Lexi Florac      Xinyi Kong         Samuel Pfrang      Ryan Wenzel
Samantha Groh    David Lang         Mariah Rogers       Ingrid Zhou
Eleanor Hanson   Katharine Madigan  Samantha Rudy        Rebecca Zimmermann
Congratulations Grads!
Scholarships & Awards

In partnership with the College of Agricultural and Life Sciences, the Department manages a number of scholarships that offset costs of higher education. These scholarships are made available through generous gifts from donors and sponsorships from industry partners. In sum, well over $40,000 is allocated to deserving undergraduate and graduate students of Food Science programs. The following is a sampling of awards granted for 2020-2021.

**SCHOLARSHIPS**

**The Badger Flyers Scholarship** is part of an organization made up of companies such as Wisconsin Dairy and Ice Cream Supplemen’s Association and the Wisconsin Dairy Products Association that sold supplies to the dairy and ice cream manufacturers. This is awarded to students getting a degree in either Dairy Chemistry or Dairy Manufacturing. The recipients are **Liz James** and **Kaitlyn Younger**.

**The Chiquita Brands Fritz Friday Food Science Scholarship** pays tribute to Carleton Friday, a leader in the Wisconsin food processing industry, given to students with a minimum GPA of 3.5. This was awarded to **Claire Michel**.

**Anna Larson** was awarded the **Dorothea Kroncke Scholarship**. This scholarship is based on exhibiting good citizenship and being involved on campus through volunteering and extracurriculars.

**The Dr. Keizaburo Mogi Scholarship** was awarded to **Mikala Weishair, Zoe Atkins, Emma Hanisko** and **Annika Madler**. The requirements are for junior and senior students majoring in Food Science.
liz d'auria is the recipient of the hans f. dresel memorial scholarship. this scholarship is awarded to a junior or senior student who is interested in pursuing a career in the confectionery or chocolate related industries. upon faculty recommendation, the student who receives this scholarship must go through a challenging and impressive process.

kate higgins was awarded with the madison west kiwanis-dickson scholarship. for sophomore, junior, or senior standing students who display enthusiasm for agricultural and food sciences.

claire sipple has received the paul mcshane memorial scholarship. awarded to incoming sophomores or juniors that demonstrate interest in dairy science, food science, or nutritional science.

tanner bilstad and jordan ishuzu both received the ross charles pech memorial trust scholarship, an award based on scholastic ability.

caroline lunning has received the photo colorant scholarship not just this year, but last year as well. this scholarship is offered in jean a. goldman's honor, offered to juniors and seniors.

grants

the bill reese deli and bakery study grant is offered to undergraduate freshmen with outstanding extracurricular activities. this has been awarded to the following recipients: kate higgins, justin bach, sophie post, erin springer, orion perez, rebecca goodman, elizabeth binversie, alexandra neikirk, jordana resnikof, james richardson, calvin slaughter, anne wenzel, and stephen zheng.
AWARDS

The Charles Eckberg Memorial Award is awarded to a Sophomore, Junior and/or Senior who is interested in going into the Dairy Industry after graduation. These students are Claire Sipple, Mikayla Haack (who won this award sophomore year as well), and Grace Larson (who won this award junior year as well) respectively by grade.

Peach Khongkomolsakul has been a recipient of the Steenbock Borden Award. This is awarded to an academically outstanding Food Science Student with a minimum GPA of 3.75.

If you would like to learn more about these scholarships and many others please visit the link below for more information: https://ecalsforstudents.cals.wisc.edu/noms_foodsci/#hans-f-dresel-memorial-scholarship

DISTINGUISHED SCHOLARS

MAKE A GIFT

To mail a donation to support the Department of Food Science, include the fund number (132399840) and the designation “Department of Food Science Fund.” The check should be made payable to the University of Wisconsin Foundation.

Mail
UW Foundation
U.S. Bank Lockbox
P.O. Box 78807
Milwaukee, WI 53278-0807

To make a donation online, supportuw.org/give

Thank you!

Shenwei Zhang
Phi Tau Sigma

Michael O'Connell
Wisconsin IFT Scholarship

Justin Chow
Phi Tau Sigma

Anna Johnson
Doug Hyslop Award
The Department is pleased to announce that Mary Stuiber, in partnership with the UW Foundation, has generously created a fund in honor of her late husband, Dr. David Stuiber. Dr. Stuiber was a faculty member at UW Madison and specialized in the area of fermentation. He worked with the Food Science Department, the Seat Grant Institute and UW Extension from 1969-1994.

This scholarship is open to any undergraduate pursuing a certificate or major in fermentation science. Preference will also be given to students with demonstrated financial need. The Department is grateful for this generous gift.
Knowledge and Online Delivery

Long before our full transition to remote instruction to accommodate the realities of COVID-19, the Department was offering new online courses and working to offer more. Food Science 120: Introduction to Food Science made its debut in the Summer of 2018. This 3-credit course is designed to introduce non-majors to the wonder of Food Science and serve as a recruitment course into the major. This course fulfills the biological requirement and is taught by Dr. Tu-Anh Huynh. Our latest venture into online presence is FS 375: Fermented Food and Beverages; science, art and health. Nick Smith serves as lead instructor and works in partnership with Monica Theis and Jon Roll; faculty associate in the Department of Bacteriology. This course is uniquely designed for non-majors with an interest in fermented foods and an appreciation for the craftsmanship behind products such as kimchi, kombucha, yogurt, wine and (of course) beer. Most challenging, is the transition of our summer short courses to online formats. For decades, we delivered a number of popular, face-to-face short courses during the summer months. These courses are specific to industry and attract learners from around the globe. Courses include our Candy School and Milk Pasteurization with lead instructors Rich Hartel and Scott Rankin respectively. Fortunately, with the tireless help of our Faculty and Staff, the Candy Course is up and running as we go to press. The Milk Pasteurization course is "under construction" and will be launched later this summer.
Building Renovation Continues

Despite COVID disruptions, progress continues on the Babcock renovation. This three-story addition will be the new home for the Center for Dairy Research. Construction workers are busy working on new spaces for milk intake and dryer facilities. Special recognition goes to our building manager Tami Noll for her tireless oversight of day-to-day changes and thoughtful communications to keep us posted on safety and facility operations. Thank you Tami!

Stay Safe; Stay in Touch!

If you would like to be added to the list to receive our newsletter via e-mail, contact us at: verhage@wisc.edu