

## Quarterly Newsletter

**Vol. 3 Issue 3,**  
Fall 2019 – Fall 2020

*A report on Scholarship and Academic Activities of Interdepartmental Food Science Graduate Program (IFS GP)*



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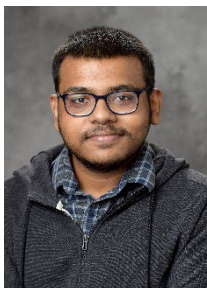
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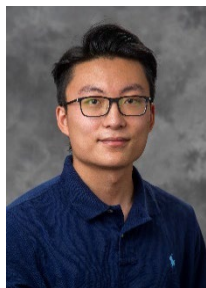
**Grad Committee Members:** Dr. Bruce Applegate, Dr. Carlos Corvalan, Dr. Bruce Hamaker, Dr. Owen Jones, Dr. Charles Santerre

**Message to our readers:** COVID-19 is not only responsible for the global health crisis but is also affecting our academic life. It disrupted our Newsletter publication from Fall 2019 – Fall 2020 and we hope to resume our quarterly publication efforts from 2021. Congratulations to our graduate students and faculty mentors for their outstanding achievements in the past academic year!

Welcome new Food Science Fall 2019 – Fall 2020 graduate students!!



Subhadeep Bose  
M.S.  
Jones Lab



Xiang Cheng  
M.S.  
Mishra Lab



Nicholas Gallina  
Ph.D.  
Bhunia Lab



Harrison Helmick  
M.S.  
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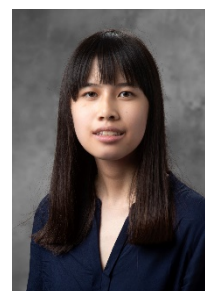
**Medhi Marashi**  
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**Natalie Mudd**  
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**Phuong "Mai" Lea Nguyen**  
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**Maria Catalina Nino**  
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**Adrianna Pilch**  
M.S.  
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M.S.  
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**Adam Quinn**  
Ph.D.  
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**Ajay Rawat**  
M.S.  
Mishra Lab



**Monica Richmond**  
M.S.  
Hamaker Lab



**Wenyi Fu**  
M.S.  
Reddivari Lab



**Merlyn Thomas**  
Ph.D.  
Feng Lab

## Peer-Reviewed Publications

1. Aguilar-Toalá, J.E. & **Liceaga, A.M.** (2020). Cellular antioxidant effect of bioactive peptides and molecular mechanisms underlying: beyond chemical properties. *International Journal of Food Science & Technology*. <https://doi.org/10.1111/ijfs.14855>.
2. **Allan, M.C., Chamberlain, M. & Mauer, L.J.** (2020). Effects of sugars and sugar alcohols on the gelatinization temperatures of wheat, potato, and corn starches. *Foods*, 9(6), 757.
3. **Allan, M.C., Grush, E. & Mauer, L.J.** (2020). RH-temperature stability diagram of  $\alpha$ - and  $\beta$ -anhydrous and monohydrate lactose crystalline forms. *Food Research International*, 127, 108717.
4. **Allan, M.C., Grush, E.N., Rajwa, B.P., Butzke, C.E. & Mauer, L.J.** (2019). Determination of the Water Activities of Wines and Spirits. *Food Analytical Methods*, 12(12), 2753-2763.
5. **Allan, M.C., Owens, B. & Mauer, L.J.** (2020). Relative humidity-temperature transition boundaries for anhydrous  $\beta$ -caffeine and caffeine hydrate crystalline forms. *Journal of Food Science*, 85(6), 1815-1826.
6. **Arioglu-Tuncil, S., Voelker, A.L., Taylor, L.S. & Mauer, L.J.** (2020). Amorphization of thiamine chloride hydrochloride: Effects of physical state and polymer type on the chemical stability of thiamine in solid

- dispersions. *International Journal of Molecular Sciences*, 21(16), 5935.
7. **Arioglu-Tuncil, S., Voelker, A.L., Taylor, L.S. & Mauer, L.J.** (2020). Amorphization of Thiamine Mononitrate: A Study of Crystallization Inhibition and Chemical Stability of Thiamine in Thiamine Mononitrate Amorphous Solid Dispersions. *International Journal of Molecular Sciences*, 21(24), 9370.
  8. **Assisi, C., Forauer, E., Oliver, H.F. & Etter, A.J.** (2020). Genomic and Transcriptomic Analysis of Biofilm Formation in Persistent and Transient *Listeria monocytogenes* Isolates from the Retail Deli Environment Does Not Yield Insight into Persistence Mechanisms. *Foodborne Pathogens and Disease*. <https://doi.org/10.1089/fpd.2020.2817>.
  9. **Ayua, E.O., Kazem, A.E. & Hamaker, B.R.** (2020). Whole grain cereal fibers and their support of the gut commensal Clostridia for health. *Bioactive Carbohydrates and Dietary Fibre*, 24, 100245.
  10. **Bai, J., Farias-Pereira, R., Zhang, Y., Jang, M., Park, Y. & Kim, K.H.** (2020). *C. elegans* ACAT regulates lipolysis and its related lifespan in fasting through modulation of the genes in lipolysis and insulin/IGF-1 signaling. *BioFactors*, 46(5), 754-765.
  11. **Bai, J., Jang, M., Pereira, R.F., Zhang, Y., Xu, H., Park, Y. & Kim, K.H.** (2020). Azelaic Acid Promotes Fatty Acid Desaturation in *Caenorhabditis elegans* at Cold Temperature, Thereby Enhancing Longevity. *Current Developments in Nutrition*, 4(Supplement\_2), 6-6.
  12. **Bailey, M., Taylor, R., Brar, J., Corkran, S., Velasquez, C., Novoa-Rama, E., Oliver, H.F. & Singh, M.** (2020). Prevalence and antimicrobial resistance of *Salmonella* from antibiotic-free broilers during organic and conventional processing. *Journal of Food Protection*, 83(3), 491-496.
  13. **Bao, Y., Reddivari, L. & Huang, J.Y.** (2020). Development of cold plasma pretreatment for improving phenolics extractability from tomato pomace. *Innovative Food Science & Emerging Technologies*, 65, 102445.
  14. **Bao, Y., Reddivari, L. & Huang, J.Y.** (2020). Enhancement of phenolic compounds extraction from grape pomace by high voltage atmospheric cold plasma. *LWT*, 133, 109970.
  15. **Barrett, T. & Feng, Y.** (2020). Content analysis of food safety implications in online flour-handling recipes. *British Food Journal*. 123 (3), 1024-1041.
  16. **Barrett, T. & Feng, Y.** (2020). Effect of Observational Evaluation of Food Safety Curricula on High School Students' Behavior Change. *Journal of Food Protection*, 83(11), 1947-1957.
  17. **Barrett, T.E., Feng, Y. & Wang, H.H.** (2020). Food safety in the classroom: Using the Delphi technique to evaluate researcher-developed food safety curriculum aligned to state academic standards. *Journal of Food Science Education*, 19(3), 152-172.
  18. **Barrett, T., Feng, Y., Chen, H., Chuang, E., Feist, S. & Choate, M.** (2020). Evaluation of the fight BAC! The story of your dinner campaign video: A multistate study. *Journal of Food Protection*, 83(4), 584-598.
  19. **Bhunia A.K., Bisha B., Gehring A.G. & Brehm-Stecher, B.F.** (2020). Advances in Foodborne Pathogen Analysis. *Foods*. 9(11):1635.
  20. **Biruete, A., Gallant, K.M.H., Lindemann, S.R., Wiese, G.N., Chen, N.X. & Moe, S.M.** (2019). Phosphate binders and nonphosphate effects in the gastrointestinal tract. *Journal of Renal Nutrition*, 30(1), 4-10.
  21. **Bishehsari, F., Engen, P.A., Voigt, R.M., Swanson, G., Shaikh, M., Wilber, S., Naqib, A., Green, S.J., Shetuni, B., Forsyth, C.B., Saadalla, A., Osman, A., Hamaker, B.R., Keshavarzian, A. & Khazaie, K.** (2020). Abnormal eating patterns cause circadian disruption and promote alcohol-associated colon carcinogenesis. *Cellular and Molecular Gastroenterology and Hepatology*, 9(2), 219-237.
  22. **Bohutskyi, P., McClure, R.S., Hill, E.A., Nelson, W.C., Chrisler, W.B., Nuñez, J.R., Renslow, R.S., Charania, M.A., Lindemann, S.R. & Beliaev, A.S.** (2019). Metabolic effects of vitamin B12 on physiology, stress resistance, growth rate and biomass productivity of *Cyanobacterium stanieri* planktonic and biofilm cultures. *Algal Research*, 42, 101580.
  23. **Boonmee, A., Oliver, H.F. & Chaturugakul S.** (2019). *Listeria monocytogenes*  $\sigma$ A is Sufficient to Survive Gallbladder Bile Exposure. *Frontiers in Microbiology*, 10, 2070.
  24. **Britton, B.C., Geornaras, I., Reagan, J.O., Mixon, S., Woerner, D.R. & Belk, D.E.** (2020). Antimicrobial efficacy of acidified peroxyacetic acid treatments against surrogates for enteric pathogens on prerigor beef. *Meat and Muscle Biology*. 4(1): 30, 1–7.
  25. **Burgess, H.J., Williams, B., Landay, A., Engen, P., Raeisi, S., Naqib, A., Fogg, L.L., Keshavarzian, A., Rasmussen, H.E., Zhang, X., Hamaker, B.R. & Green, S.J.** (2020). Sleep Health Should be Included as a Therapeutic Target in the Treatment of HIV. *AIDS research and human retroviruses*, 36(8), 631-631.
  26. **Burnett, J., Wu, S.T., den Bakker, H.C., Cook, P.W., Veenhuizen, D.R., Hammons, S.R., Singh, M. & Oliver, H.F.** (2020). *Listeria monocytogenes* is prevalent in retail produce environments but *Salmonella enterica* is rare. *Food Control*, 113, 107173.
  27. **Castanha, N., Miano, A.C., Jones, O.G., Reuhs, B.L., Campanella, O.H. & Augusto, P.E.** (2020). Starch

modification by ozone: Correlating molecular structure and gel properties in different starch sources. *Food Hydrocolloids*, 108, 106027.

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29. Chen, D., **Fang, F., Federici, E.,** Campanella, O. & **Jones, O.G.** (2020). Rheology, microstructure and phase behavior of potato starch-protein fibril mixed gel. *Carbohydrate Polymers*, 239, 116247.
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31. **Chen, H., Kinchla, A.,** Richard, N., Shaw, A. & **Feng, Y.** (2020) Produce Growers' On-Farm Food Safety Education: A Review. *Journal of Food Protection*. doi: <https://doi.org/10.4315/JFP-20-320>.
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39. Díaz-Amaya, S., Lin, L.-K., **Deering, A.J. & Stanciu, L.A.** (2019). Aptamer-based SERS Biosensor for Whole Cell Analytical Detection of *E. coli* O157:H7. *Analytica Chimica Acta*, 1081, 146-156.
40. **Drolia, R.,** Amalaradjou, M.A.R., **Ryan, V., Tenguria, S.,** Liu, D., **Bai, X., Xu, L., Singh, A.K.,** Cox, A.D., Bernal-Crespo, V., Schaber, J.A., **Applegate, B.,** Vemulapalli, R. & **Bhunia, A.K.** (2020). Receptor-targeted engineered probiotics mitigate lethal *Listeria* infection. *Nature Communications*, 11, 6344.
41. **El-Hindawy, M., Kim, C.Y. & Hamaker, B.** (2019). Starch Digestion Products Activate Enteroendocrine L-cells and Their Ileal Delivery Through the Diet Contributes to Weight Management in Mice. (P08-005-19). *Current Developments in Nutrition*, 3, nzz044, P08-005-19.
42. Engen, P.A., Zaferiou, A., Rasmussen, H., Naqib, A., Green, S.J., Fogg, L.F., Forsyth, C.B., Raeisi, S., **Hamaker, B.R. & Keshavarzian, A.** (2020). Single-Arm, Non-randomized, Time Series, Single-Subject Study of Fecal Microbiota Transplantation in Multiple Sclerosis. *Frontiers in Neurology*, 11, 978.
43. **Erickson, D.P., Ozturk, O.K.,** Selling, G., **Chen, F.,** Campanella, O.H. & **Hamaker, B.R.** (2020). Corn zein undergoes conformational changes to higher  $\beta$ -sheet content during its self-assembly in an increasingly hydrophilic solvent. *International Journal of Biological Macromolecules*, 157, 232-239.
44. **Fang, F., Hayes, A.M.R.,** Watanabe, H., Campanella, O.H. & **Hamaker, B.R.** (2020). Isomaltodextrin strengthens model starch gels and moderately promotes starch retrogradation. *International Journal of Food Science & Technology*. doi: 10.1111/ijfs.14782.
45. **Fang, F.,** Luo, X., **BeMiller, J.N.,** Schaffter, S., **Hayes, A.M.R, Woodbury, T.J., Hamaker, B.R. & Campanella, O.H.** (2020). Neutral hydrocolloids promote shear-induced elasticity and gel strength of gelatinized waxy potato starch. *Food Hydrocolloids*, 107, 105923.
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47. **Fang, F., Martinez, M.M.,** Campanella, O.H. & **Hamaker, B.R.** (2020). Long-term low shear-induced highly viscous waxy potato starch gel formed through intermolecular double helices. *Carbohydrate Polymers*, 232, 115815.

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53. **Feng, Y. & Archila, J.** (2020). Consumer knowledge and behaviors regarding food safety risks associated with wheat flour. *Journal of Food Protection*. 2020 Nov. doi: 10.4315/jfp-19-562.
54. **Ferruzzi, M.G., Hamaker, B.R. & Bordenave, N.** (2020). Phenolic compounds are less degraded in presence of starch than in presence of proteins through processing in model porridges. *Food Chemistry*, 309, 125769.
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57. Gangoiti, J., **Corwin, S.F., Lamothe, L.M., Vafiadi, C., Hamaker, B.R.** & Lubbert, D. (2020) Synthesis of novel  $\alpha$ -glucans with potential health benefits through controlled glucose release in the human gastrointestinal tract, *Critical Reviews in Food Science and Nutrition*, 60:1, 123-146
58. Glowacki, R.W.P., Pudlo, N.A., **Tuncil, Y., Luis, A.S., Sajjakulhukit, P., Terekhov, A.I., Lyssiotis, C.A., Hamaker, B.R.** & Martens, E.C. (2020). A Ribose-Scavenging System Confers Colonization Fitness on the Human Gut *Bacteriodes thetaiotaomicron* in a Diet-Specific Manner. *Cell Host & Microbe*, 27(1), 79-92, e9.
59. Gu, F., Li, C., **Hamaker, B.R., Gilbert, R.G. & Zhang, X.** (2020). Fecal microbiota responses to rice RS3 are specific to amylose molecular structure. *Carbohydrate Polymers*, 243, 116475.
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61. **Hall, F., Reddivari, L. & Liceaga, A.M.** (2020). Identification and Characterization of Edible Cricket Peptides on Hypertensive and Glycemic In Vitro Inhibition and Their Anti-Inflammatory Activity on RAW 264.7 Macrophage Cells. *Nutrients*, 12(11), 3588.
62. **Hamaker, B.R. & Cantu-Jungles, T.M.** (2020). Discrete Fiber Structures Dictate Human Gut Bacteria Outcomes. *Trends in Endocrinology & Metabolism*, 31(11), 803-805.
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65. **Hayes, A.M.R., Gozzi, F., Diatta, A., Gorissen, T., Swackhamer, C., Bellmann, S. & Hamaker, B.R.** (2020). Some pearl millet-based foods promote satiety and reduce glycaemic response in a crossover trial. *British Journal of Nutrition*. doi: 10.1017/S0007114520005036.
66. **Hayes, A.M.R., Okoniewska, M., Martinez, M.M., Zhao, B. & Hamaker, B.R.** (2020). Investigating the potential of slow-retrograding starches to reduce staling over time in soft savory bread and sweet cake model systems. *Food Research International*. 138,109745.
67. **Hayes, A.M.R., Swackhamer, C., Mennah-Govela, Y., Martinez, M.M., Diatta, A., Bornhorst, G.M. & Hamaker, B.R.** (2020). Pearl millet (*Pennisetum glaucum*) Couscous Breaks Down Faster than Wheat Couscous in the Human Gastric Simulator, though has Slower starch Hydrolysis. *Food and Function*. 11,111-122. Selected as front cover for journal issue. [first published online in 2019]
68. He, B.-L., Zheng, Q., Guo, L.-Q., **Huang, J.Y., Yun, F., Huang, S.-S. & Lin, J.-F.** (2020). Structural characterization and immune-enhancing activity of a novel high-molecular-weight polysaccharide from *Cordyceps militaris*. *International Journal of Biological Macromolecules*, 145, 11-20.
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70. Hillman, E.T., Kozik, A.J., Hooker, C.A., **Burnett, J.L.**, Heo, Y., Kiesel, V. A., Nevins, C.J., **Oshiro, J.M.**, Robins, M.M., **Thakkar, R.D.**, **Wu, S.T.** & **Lindemann, S.R.** (2020). Comparative genomics of the genus *Roseburia* reveals divergent biosynthetic pathways that may influence colonic competition among species. *Microbial Genomics*, 6(7), mgen000399.
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72. Ishaq, A., ur Rahman, U., Sahar, A., Perveen, R., **Deering, A.J.**, Khalil, A.A., Aadil, R.M., Hafeez, M.A., Khaliq, A. & Siddique, U. (2020). Potentiality of analytical approaches to determine gelatin authenticity in food systems: A review. *LWT*, 121, 108968.
73. Jang, M., **Kim, K.H.** & Kim, G.H. (2020). Antioxidant capacity of thistle (*Cirsium japonicum*) in various drying methods and their protection effect on neuronal PC12 cells and *Caenorhabditis elegans*. *Antioxidants*, 9(3), 200.
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76. Kim, H.J., Yang, T., Choi, S., Wang, Y.J., Lin, M.Y. & **Liceaga, A.M.** (2020). Supplemental intracavity far-red radiation to red LED light improves fruit quality attributes of greenhouse tomatoes. *Scientia Horticulturae*, 261, 108985.
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81. Lee, J.Y., Haruta, S., Kato, S., Bernstein, H.C., **Lindemann, S.R.**, Lee, D.Y., Frederick, J.K. & Song, H.S. (2020). Prediction of Neighbor-Dependent Microbial Interactions From Limited Population Data. *Frontiers in Microbiology*, 10, 3049.
82. Li, M., **Ndiaye, C.**, Corbin, S., Foegeding, E.A. & **Ferruzzi, M.G.** (2020). Starch-phenolic complexes are built on physical CH- $\pi$  interactions and can persist after hydrothermal treatments altering hydrodynamic radius and digestibility of model starch-based foods. *Food Chemistry*, 308, 125577.
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84. Li, S., Wang, T., Xu, B., Indukuri, V., Vanamala, J. & **Reddivari, L.** (2020). Anthocyanin-Containing Purple Potatoes Ameliorate DSS-Induced Colitis in Mice. *Current Developments in Nutrition*, 4, 426-426.
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142. **Zhang, X., Chen, T., Lim, J., Gu, F., Fang, F., Cheng, L., Campanella, O.H. & Hamaker, B.R.** (2019). Acid Gelation of Soluble Laccase-Crosslinked Corn Bran Arabinoxylan and Possible Gel Formation Mechanism. *Food Hydrocolloids*, 92, 1-9.
143. **Zhao, M., Diaz-Amaya, S., Deering, A.J., Stanciu, L., Chiu, G.T.C. & Allebach, J.P.** (2020). Image Analytics for Food Safety. *Electronic Imaging*, 2020(8), 302-1.
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## Graduated Students with Thesis/Dissertation Titles (Fall 2019 – Fall 2020)

### Fall 2019

1. **Nuseybe Bulut-MS (Hamaker):** Fabrication of Model Plant Cell Wall Materials to Probe Gut Microbiota Use of Dietary Fibers
2. **Gabriela Calzada Luna-MS (Liceaga):** Cricket (*Acheta domesticus*) Protein Hydrolysates: Functional Properties and Application in a Food Matrix
3. **Rachel Jackson-MS (Hamaker):** Consequences of Dietary Fibers and their Proportion on the Fermentation of Dietary Protein by Human Gut Microbiota
4. **Jongbin Lim-PhD (Hamaker):** Structural Specificity of Flavonoids to Selectively Inhibit Starch Digestive Enzymes for Triggering the Gut-Brain Axis
5. **Moustapha Moussa-PhD (Hamaker):** Innovative Millet Foods to Improve Nutrition and Expand Markets in West Africa
6. **Tahrira Rouf-PhD (Kokini):** Design and Mechanistic Understanding of Zein Nanocomposite Films and Its Implementation in an Amperometric Biosensor for the Detection of Gliadin

7. **Uriel Urbizo Reyes-MS (Liceaga):** Improvement of Functional and Bioactive Properties of Chia Seed (*Salvia hispanica*) Protein Hydrolysates and Development of Biodegradable Films using Chia Seed Mucilage.

### Spring 2020

1. **Ahmad Al-Eissa-MS (Huang):** Sustainable Shrimp Production Chain in the Midwestern United States
2. **Yiwen Bao-MS (Huang):** Innovative Cold Plasma-assisted Extraction for Bioactive Compounds from Agriculture Byproducts
3. **Tressie Barrett-MS (Feng):** Subjective Norms in Food Safety: An Evaluation of Classroom and Popular Web-Based Key Influencers Impact on Consumer Food Safety
4. **Jose Bonila Oliva-PhD (Kokini):** Understanding the Mixing Dynamics and Structural Functionality of Gluten Subunits Tagged with Quantum Dots in Wheat Dough and Analyzed by Confocal Microscopy and Quantitative Imaging Techniques
5. **Dennis Cladis-PhD (Kim):** Consuming High Doses of Blueberry Polyphenols is Safe, but Induces Dose-Dependent Shifts in Metabolism
6. **Joseph King-MS (Liceaga):** Physicochemical and Sensory Evaluation of Evaluation of Invasive Silver Carp (*Hypophthalmichthys Molitrix*) Fish Nuggets
7. **Halak Mehta-MS (Mishra):** Design of Complementary Experiments for Estimation of Temperature-Dependent Thermal Properties
8. **Maria Belen Salazar Tijerno (Huang):** Evaluation of The Techno-economic And Environmental Performance of Craft Beer Production: A Case Study on Microbrewery
9. **Tongyu “Sophie” Wu-PhD (Oliver):** Assessing Listeria Monocytogenes Contamination Risk using Predictive Risk Models and Food Safety Culture Management in Retail Environments

### Summer 2020

1. **Fernando Canteraro Rivera-MS (Mishra):** Development of a Non-Intrusive Continuous Sensor for Early Detection of Fouling in Commercial Manufacturing Systems
2. **Sarah Corwin-PhD (Hamaker):** Structural and Functional Properties of Enzymatically Modified Slow Digesting Alpha-Glucans
3. **Hazal Turasan-PhD (Kokini):** Fabrication of Zein-Based Biodegradable Surface-Enhanced Raman Spectroscopy Biosensor Platforms for the Detection of Food Toxins
4. **Yizhe “Bruce” Zhang-PhD (Huang):** Developing Advanced Antifouling Surfaces via Molecular Level Modifications

### Fall 2020

1. **Han Chen-MS (Feng):** Needs Assessment of Food Safety Education for Small-Scale Farmers
2. **Felicia Hall-PhD (Liceaga):** Functional Properties of Whole Tropical Banded Cricket (*Gryllobates sigillatus*) Protein Hydrolysates
3. **Enosh Kazem-MS (Hamaker):** Prebiotic Potential of a Wide Selection of Tubers, Grains, and Pulses Relative to Fructo-Oligosaccharide
4. **Geraldine Tembo-MS (San Martin):** Effects of Storage Conditions on  $\alpha$ -Acid Degradation on Indiana Grown Hops (*humulus lupulus*)
5. **Adrienne Voelker-PhD (Mauer):** Degradation Pathways of Thiamine and the Impact on Food Quality and Sensory Attributes
7. **Luping Xu-MS (Bhunja):** Mammalian Cell-Based Sensors for Foodborne Pathogen Detection

## Graduate Student/Post Doctorate Achievements/Awards

1. **Xiangjian Bai**-OIGP Bilsland Fellowship, Fall 2020.
2. **Brianna Britton**-IFT Graduate Student Scholarship, March 2020.  
IAFP Student Travel Scholarship, March 2020.  
Meat Industry Suppliers Alliance Scholarship, July 2020.  
USDA Agriculture and Food Research Initiative-Predoctoral Fellowship, July 2020.
3. **Jingfan Chen**-PRF Grant, Fall 2020.
4. **Sarah Corwin**-College of Agriculture Graduate Spotlight, Summer 2020.
5. **Javier Cruz Padilla**- International Society of Beverage Technologist (ISBT) Scholarship, October 2020.
6. **Enrico Federici**- ABE Purdue Industrial research symposium Biotechnology, Regulations, Food Processing, poster competition 1st place, February 2020.
7. **Anna Hayes**-IFT Carbohydrate Division, Outstanding Service Award, July 2020.  
Purdue Graduate Student Government Travel Grant Recipient (Top Tier), Fall 2019.  
Phi Tau Sigma Dr. Gideon 'Guy' Livingston Scholarship Recipient, July 2020.
8. **Morgan Malm**-Indiana Statehouse Honoree-Soybean Product Innovation Award, January 2020.Nat
9. **Natalie Mudd**-Ross Fellowship, Fall 2020.
10. **Carine Nkemngong**-B.J. Liska Outstanding Teaching Assistant Award. Fall 2019.
11. **Adrianna Pilch**-ARGE Fellowship, Fall 2020.
12. **Adam Quinn**-ARGE Fellowship, Fall 2020.
13. **Monica Richmond**-Lynn Fellowship, Fall 2020.
14. **Maria Belen Salazar Tijerno**-International Society of Beverage Technologist (ISBT) Scholarship, Fall 2019.
15. **Manalee Samaddar**-PRF Grant, Fellowship, Fall 2020.
16. **Pablo Torres Aguilar**-Commission on Dietetic Registration Second Century Scholarship, Fall 2020.
17. **Adrienne Voelker**-OIGP Bilsland Fellowship, Fall 2020.
18. **Travis Woodbury**-Krannert Applied Management Principles Program, Summer 2020
19. **Bruce Zhang**, Certificate of Excellence Award, Office of Interdisciplinary Graduate Programs, Purdue University, Fall 2019.