Quarterly Newsletter
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Fall 2019 – Fall 2020

A report on Scholarship and Academic Activities of Interdepartmental Food Science Graduate Program (IFSGP)

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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.
Kokini Lab

Gurpreet Kaur
Ph.D.
Oliver Lab
Peer-Reviewed Publications


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


(enhanced SERS) Platform with Deposition of Au, Ag and Au/Ag Nanoparticles on Gold Coated Zein Nanophotonic Structures for the Detection of Food Analytes. Vibrational Spectroscopy, 106, 103013.


### 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. **Tahrima 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
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 (Gryllodes 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 a-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
8. Luping Xu-MS (Bhunia): Mammalian Cell-Based Sensors for Foodborne Pathogen Detection
Graduate Student/Post Doctorate Achievements/Awards

1. Xiangjian Bai- OIGP Bilsland Fellowship, Fall 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.
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.
11. Adrianna Pilch- ARGE Fellowship, Fall 2020.
12. Adam Quinn- ARGE 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.
19. Bruce Zhang, Certificate of Excellence Award, Office of Interdisciplinary Graduate Programs, Purdue University, Fall 2019.