Aeneas Oliver Koosis

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EDUCATION

2020-2025 Ph.D. in Nutrition
Wayne State University, Department of Nutrition and Food Science, Detroit, MI
Advisor: Dr. Alyssa Beavers
Dissertation: Navigating Food Systems: Socioeconomic Dynamics, Retail Environments, and Food Security in Michigan During COVID-19
2017-2019 M.S. in Animal Science and Food Science
University of Kentucky, Department of Animal and Food Sciences, Lexington, KY
Advisor: Youling Xiong
Thesis: Thermal Interfacial and Application Properties of Green Pea Protein
2013-2017 B.S. in Dairy Science
Michigan State University, Department of Animal Science, East Lansing, MI

PUBLICATIONS

Peer-Reviewed

Koosis AO, Hill AB, Beavers A. (2024) "I Shouldn't Have to Drive to the Suburbs": Grocery Store Access, Transportation, and Food Security in Detroit During COVID-19. Nutrients.
Koosis AO, Hill AB, Beavers A. (2024) Longitudinal Study of Food Environment Quality and Chronic Disease Trends in Detroit (2014-2024): The Role of Grocery Stores in Public Health. Health and Place. Under review.
Koosis AO, Beavers A. (2024) Home Gardening's relationship to Food Security and Produce Trust During the COVID-19 Pandemic: A Cross-Sectional Study in Michigan. Journal of Hunger & Environmental Nutrition. Under review.
Gilleran, MM., Koosis, AO., Hill, AB., & Beavers, AW. (2023). A Qualitative Examination of the Detroit Community Food Response to COVID-19. Nutrients, 15(13), 3047.
Gilleran, MM, Koosis AO, Hill AB, Beavers A, Whaley M Detroit Food Survey Report (2022)
Sha, L., Koosis, A. O., Wang, Q., True, A. D., & Xiong, Y. L. (2021). Interfacial dilatational and emulsifying properties of ultrasound-treated pea protein. Food Chemistry, 350, 129271.
Xiong, X., He, B., Jiang, D., Dong, X., Koosis, A., Yu, C., & Qi, H. (2019). Postmortem biochemical and textural changes in the Patinopecten yessoensis adductor muscle (PYAM) during iced storage. International Journal of Food Properties, 22(1), 1024-1034.

In Preparation

Koosis AO, Kuhl E, Tac V. (2026) Hyperelastic Mechanical Behavior of Widely Consumed Edible Mushrooms. Acta Biomaterialia. In preparation.
Koosis AO, Kuhl E. (2026) Consumer Perception of Texture in Fungi-Based Burger Alternatives: A Sensory Evaluation Study. Food Quality and Preference. In preparation.
Koosis AO, Kuhl E. (2026) Sensory and Mechanical Comparison of Plant-Based and Animal-Based Meatballs in University Dining Settings. Journal of Food Science. In preparation.

AWARDS

- Thomas C. Rumble University Graduate Fellowship
- Andrew R. and Claudine Burkhart Jackson Dairy Food Science and Human Nutrition Scholarship

- Verlene & Dale K. Weber Food Science Scholarship
- University of Kentucky Graduate Research Symposium Award

PROFESSIONAL EXPERIENCE

2026-present, Postdoctoral Scholar

Stanford University, Department of Mechanical Engineering, CA

- Conducting research on mechanical characterization and sensory properties of plant-based and fungi-based meat alternatives
- Applying hyperelastic constitutive modeling to characterize texture properties of edible mushrooms
- Designing and executing sensory evaluation studies comparing alternative proteins to conventional meat products
- Collaborating with the Living Matter Lab (PI: Ellen Kuhl) on food mechanics research

2024-2025, Sensory Science Lead

Wayne State University, MI

- Restored and reopened Wayne State's consumer research center for both internal and external clients
- Expertise in sensory research techniques, including descriptive analysis, rapid profiling, discrimination, and affective testing

2021-2025, Graduate Instructor

Wayne State University, MI

- Developed and presented lecture material, graded papers, and responsible for practical lab. 15-30 students per section

2020-2024, Great Grocer Project (Research Assistant)

Wayne State University, MI

- Led bilingual data collection initiative by developing Spanish-language survey tools, increasing participant diversity by 35% and enabling outreach to underrepresented communities
- Designed and implemented multi-method research approach integrating intercept surveys (n=450), in-depth interviews (n=35), and environmental assessments across 25 retail locations
- Analyzed complex mixed-methods data using SPSS and ATLAS-TI, identifying key factors influencing food security in urban Detroit
- Co-authored 3 manuscripts currently under review in peer-reviewed journals based on project findings
- Built collaborative relationships with 15+ community stakeholders, facilitating research access and ensuring community-relevant outcomes
- Creation of training materials, videos, and aids for research assistants
- Supervision of 2 to 5 research assistants

2021-2025, Editor and Writer

Faunalytics.org

- Editing research summaries, writing research summaries, communication with volunteers
- 20+ published articles

2021-2025, Best Food Forward Research Assistant

Wayne State University, MI

- Conducting multilevel evaluation through surveys, biometric screenings, focus groups, and observations among a random sample of caregiver-child dyads at three time points: preintervention, postintervention pre-COVID-19, and postintervention post-COVID-19
- Supervision of 4 undergraduate students, scheduling and supply management
- Maintained relationships with 2 different school districts, Flint and Dearborn, MI

2020-2021, Science and Art Teacher

Page Middle School, Madison Heights, MI

- Responsible for creating lesson plans, executing lessons and mentoring in middle school level science and art

2018-2019, Teaching Assistant

University of Kentucky, Lexington, KY

- Presented and assisted in the preparations and running of the meat science laboratory

2017, Product Development Intern

Garden Fresh Salsa and Hummus, Ferndale, MI

- Product development, process evaluation, and sensory evaluation

2016, Flavor Chemistry Intern

Givaudan, Cincinnati, OH

- Qualitative panel training, focus group lead, GC-MS, and GC-O for flavor applications

2015, Advanced Adhesives Research Intern

Henkel, Madison Heights, MI

- Aided with UV curing, spray application, and plasma treatment for anti-fingerprint coatings

PROFESSIONAL ASSOCIATIONS

- Society for Nutrition and Behavior Foundation 2022-present
- International Food Scientists 2018-present
- Academy of Nutrition and Dietetics 2020-present
- Center for Effective Altruism 2018-present
- Healthy Food Retail (HFR) Nutrition and Obesity Policy Research and Evaluation Network 2021-present

TEACHING

- Intro to Food Science Laboratory 2021-2025
- Canvas; Moodle; Blackboard, Desire2Learn
- Food Chemistry 2024-2025
- Food Chemistry Laboratory 2019-2020
- Canvas and Blackboard
- Sensory Science 2019-2020
- Meat Science 2017-2019

PRESENTATIONS, POSTERS AND INVITED TALKS

Conference Presentations

Koosis AO, Kuhl E, Tac V. (2026) Hyperelastic Mechanical Behavior of Widely Consumed Edible Mushrooms. 17th World Congress on Computational Mechanics (WCCM) / 10th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS), Munich, Germany, July 19-24, 2026.

Koosis & Beavers (2025) Food Access Beyond City Limits: Transportation, Grocery Store Type, and Food Security in Detroit During COVID-19. American Society of Nutrition Conference 2025

Koosis, Hill & Beavers (2025) Chain advantage: How store type and transportation drive food security in Detroit. American Public Health Association 2025 Annual Meeting

Koosis, A., & Beavers, A. (2024). Examining Associations Between Food Insecurity, Independent Grocery Store Usage, and Fresh Produce Intake in Detroit, MI. Journal of Nutrition Education and Behavior, 56(8), S18.

Detroiters' Food Needs and Perceptions of Food Assistance Programs During the COVID-19 Pandemic. Academy of Nutrition and Dietetics, 2022.

Ultrasound-induced Improvement of Emulsifying Properties of Pea Protein. IFT, 2020.

Ultrasound-induced Pea Protein and Replacement of Egg Proteins in Angel Food Cake. University of Kentucky Symposium, 2019.
Thermal Characteristics of Pea Protein Combined with Monovalent and Divalent Salts. IFT, 2019.

Invited Talks

Wayne State University

- November 2024, Plant Protein Chemistry
- November 2024, Public Health and Retail Spaces
- February 2025, Detroiters Shopping Habits
- March 2025, The functional properties of pea proteins

Healthy Eating Research (HER) and the Nutrition & Obesity Policy, Research, and Evaluation Network (NOPREN) Student Presentation Summer Series 2025

Detroit Food Policy Council Research Briefs (2023-2025) Customer Surveys/Staff Surveys, Detroit, MI

COMPUTER PROFICIENCY

SPSS, STATA, Microsoft Office, Survey Monkey, R, Python, Qualtrics, Atlas Ti, Canva, MATLAB