

Jiayu Tang

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EDUCATION

08/2024 - Present	University of Nebraska-Lincoln, United States
M.Sc., Food Science and Technology (Major), Statistics (Minor)	GPA: 4.00/4.00
<i>Thesis: Exploring the Impact of Different Dietary Pulse Market Classes on Human Gut Microbiota and Health</i>	
09/2020 - 06/2024	
B.Sc. (Dual Degree), Food Science and Technology	University of Nebraska-Lincoln, United States
	GPA (2023-2024): 3.33/4.00
B.Eng. (Dual Degree), Food Science and Engineering	Northwest A&F University, China
	GPA (2020-2023): 3.57/4.00
	Overall GPA (2020-2024): 3.52/4.00

Thesis: Effects of Three Lactic Acid Bacteria Fermentations on Phenolic Profile and In Vitro Digestive Properties of Proso Millet

PUBLICATIONS

In Preparation:

1. **Tang J**, Grimaldo C, Whisenhunt L, Majumder K, Rose D, Deehan E*. Effect of different Nebraska dry bean market classes on human health and the gut microbiota: A 3-phase randomized crossover clinical trial.
2. **Tang J[#]**, Rasmussen C[#], Deehan E*. Effect of distinct dietary pulses market classes on gut microbiome and health markers: A systematic review of intervention trials
3. **Tang J**, Deehan E*. Pulse market classes as a framework for precision nutrition: nutrient profiles, microbiome links, and cardiometabolic health
4. Grimaldo C, Whisenhunt L, **Tang J**, Chai W, Deehan E*. Evaluating interrelationships between body composition and immunometabolic dysfunction using bioelectrical impedance analysis: An observational study

Published:

1. Xiao J, Li Y, Niu L, Chen R, **Tang J**, Tong Z, Xiao C*. Effect of adding fermented proso millet bran dietary fiber on micro-structural, physicochemical, and digestive properties of gluten-free proso millet-based dough and cake. *Foods*. 2023; 12(15): 2964.
2. Deng X, Niu L, Xiao J, Guo Q, Liang J, **Tang J**, Liu X, Xiao C*. Involvement of intestinal flora and miRNA into the mechanism of coarse grains improving type 2 diabetes: an overview. *Journal of the Science of Food and Agriculture*. 2023; 103(9): 4257-4267.

[#]: represents co-first authors

^{*}: represents corresponding authors

AWARDS & SCHOLARSHIPS & ASSISTANTSHIPS

2025	Chancellor's Graduate Research Grant	\$400
2025 - 2026	Departmental Graduate Research Assistantship	\$25500
2024	Mary and Charles C. Cooper/Emma I. Sharpless Fellowship	\$3000
2024 - 2025	Departmental Graduate Research Assistantship	\$24500
2023	National Undergraduate Life Sciences Research - Silver Prize	¥3000
2022 - 2023	Undergraduate Merit Scholarship	¥1500

2021 - 2022	Undergraduate Merit Scholarship	¥1500
2020 - 2021	Undergraduate Merit Scholarship	¥1500

RESEARCH EXPERIENCE

07/2024 - Present **Department of Food Science and Technology**
Graduate Research Assistant **University of Nebraska-Lincoln**

Advisor: Dr. Edward Deehan

Human Clinical Trials:

- Co-develop a NIH-style study protocol, informed consent form, and recruitment materials with the PI; author 4 Standard Operating Procedures (SOPs) and 2 clinical trial workflows for the Deehan Lab.
- Coordinate a 12-week randomized, crossover clinical trial investigating dry bean market-class-specific effects on gut microbiota and cardiometabolic health markers (IRB Approved; ClinicalTrials.gov Registered)
- Coordinate a statewide human biobank study aims to collect and store blood and stool samples from volunteers along with their health information (IRB Approved).
- Lead 200+ clinic visits, manage participant recruitment, scheduling, documentation, and study supplies.
- Collect and process stool samples, blood samples, 24-hr blood pressure data, and other dietary information, and apply statistical analysis using R.
- Conduct DNA extraction from fecal samples for q-PCR analysis, analyze stool pH, moisture, and short chain fatty acids content.

Systematic Review:

- Conduct a systematic review aims to identify the effects of distinct dietary pulse market classes on gut microbiome and surrogate health outcomes in humans.
- Develop a PICOS-based research proposal, conduct systematic literature searching and data extraction, and apply machine learning-based tools (ASReview, TERA-Tool) for 1,800+ citations.
- Apply hybrid human-AI (LLM; Google Gemini 3) approach to assist with preliminary data extraction and formatting, and independently validate model performance with human reviewers to identify discrepancies.

04/2022 - 06/2023 **College of Food Science and Engineering**
Undergraduate Research Assistant **Northwest A&F University**

Advisor: Dr. Chunxia Xiao

- Conducted in vitro fermentation experiments to evaluate how three lactic acid bacteria species improve the phenolic content, antioxidant activity, and starch digestibility of *proso* millet powder.
- Performed spectrophotometric analyses to quantify the color characteristics of gluten-free cake crumb and crust made with *proso* millet bran.
- Conducted targeted literature research and summarize key findings on coarse grain consumption across 50+ articles, contributed to a review article determining the relationship between coarse grain consumption and Type 2 diabetes.

TEACHING EXPERIENCE

02/2025 – 04/2025 **Department of Food Science and Technology**
Guest Lecturer **University of Nebraska-Lincoln**

- Delivered 3 lectures for the Undergraduate Research Experience Course (FDST 498) on systematic reviews, covering database search strategies, PICOS-based study design, and the application of AI/ML tools to accelerate literature screening and data extraction.

01/2024 - 05/2024	Department of Food Science and Technology University of Nebraska-Lincoln
Undergraduate Teaching Assistant	
▪ Graded assignments for Cereal Technology (FDST 412) and Dairy Products Technology (FDST 429).	
08/2023 - 12/2023	Department of Food Science and Technology University of Nebraska-Lincoln
Undergraduate Teaching Assistant	
▪ Graded assignments for Human Nutrition and Metabolism (NUTR 250). ▪ Participated in the proctoring and marking of exams for 55 students.	
09/2022 - 03/2023	Foreign Department Xi'An New Oriental Education & Technology Group
Teaching Assistant (Internship)	
▪ Organized and proctored an IELTS practice exam for 71 students. ▪ Supported academic planning and language exam preparation for 4 students (Z Cui, C Huang, Y Yang, H Ma). ▪ Coordinated event planning and recruitment initiatives; recognized as “Excellent Staff of the Month.”	
02/2022 - 07/2022	College of Food Science and Engineering Northwest A&F University
Exam Proctor/Grader	
▪ Graded assignments and exams for Public Speaking (COMM 209).	

CONFERENCE PROCEEDINGS & PRESENTATIONS

- **Tang J**, Whisenhunt L, Rose D, Majumder K, Deehan E. Exploring the Impact of Different Dietary Pulses Market Classes on Host Metabolic Health and Gut Microbiome. *Food Science and Technology Symposium, University of Nebraska-Lincoln, Lincoln, NE. April 21, 2025 (Poster)*
- **Tang J**, Whisenhunt L, Rose D, Majumder K, Deehan E. Exploring the Impact of Different Dietary Pulses Market Classes on Host Metabolic Health and Gut Microbiome. *Nebraska Research Days, University of Nebraska-Lincoln, Lincoln, NE. April 16, 2025 (Poster)*
- **Tang J**, Whisenhunt L, Rose D, Majumder K, Deehan E. Exploring the Impact of Different Dietary Pulses Market Classes on Host Metabolic Health and Gut Microbiome. *Nebraska Center for the Prevention of Obesity Diseases (NPOD) 16th Annual Spring Retreat, University of Nebraska-Lincoln, Lincoln, NE. April 9, 2025 (Poster)*

MENTORSHIP

- **Mentor & Co-supervisor**, University of Nebraska-Lincoln (August 2025 – Present)
 - Mentored and co-supervised one undergraduate research assistant (C Rasmussen) for conducting a systematic review, clinical trial data entry, and research ethics.
- **Mentor**, University of Nebraska-Lincoln (May 2025 - Present)
 - Navigated a master student (L Lin) for her academic and social aspects of graduate life and connected her to relevant resources.
- **Mentor**, University of Nebraska-Lincoln (February 2025 – May 2025)
 - Mentored literature search and review for one undergraduate student (Y Yang).
- **Mentor**, Northwest A&F University (January 2023 – June 2023)
 - Mentored on lab techniques for 2 undergraduate students (Y Zhao, J Liu).

LEADERSHIP

09/2025 – Present	Graduate Student Assembly
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Graduate Representative	University of Nebraska-Lincoln
▪ Attend monthly meeting, identifying and advocating on behalf of FDST graduate regarding any issues pertaining to academic affairs.	
08/2024 – 08/2025	Department of Food Science and Technology
Graduate Student Advisory Board Member	University of Nebraska-Lincoln
▪ Organized the “Graduate Student Mentoring Program” to connect each new graduate student with assigned mentors.	
▪ Met with the Departmental Graduate Chair monthly to report on recent questions from current graduate students.	
08/2024 – 05/2025	College of Agricultural Sciences and Natural Resources
Graduate Representative	University of Nebraska-Lincoln
▪ Planned and organized three professional development workshops on professorship, the academic job market, and CV/resume writing for graduate students.	
09/2020 – 06/2022	College of Food Science and Engineering
Communications Lead	Northwest A&F University
▪ Led a team of 13 members to develop promotional newsletters and video content weekly for the College.	
▪ Coordinated with other Colleges’ team to co-publish newsletters and video content for the university.	

SERVICE

Service to the Departments, Colleges, and Universities

08/2025	Nebraska Food for Health Center
Volunteer	University of Nebraska-Lincoln
▪ Hosted an outreach session at the Ice Cream Social event to introduce and advocate for the Nebraska Food for Health Center, engaging students and faculty members in discussions about its research mission and opportunities.	
08/2023 – 05/2024	College of Food Science and Engineering
Academic Advisor	Northwest A&F University
▪ Advised 19 freshmen on their academic planning, research opportunities, and career development.	
10/2021 – 08/2023	College of Food Science and Engineering
Academic Coordinator	Northwest A&F University
▪ Facilitated communication between 59 undergraduate students and the College of Food Science and Technology to address academic and student life concerns.	
▪ Supported “3+1” program events and activities, academic advising sessions, and handled daily student inquiries regarding to their grades and courses.	
08/2022	Office of Undergraduate Studies
Volunteer	Northwest A&F University
▪ Assisted with student orientation and organized outreach activities to promote student engagement.	

Service to Profession

11/2024
Junior Reviewer, Clinical Nutrition

Service to Community

06/2022

Volunteer

College of Food Science and Engineering
Northwest A&F University

- Participated in Undergraduate Rural Voluntary Activities for Poverty Alleviation to deliver outreach and educational programs on food safety for rural school children and families.

PROFESSIONAL DEVELOPMENT

Certifications

- **Python for Data Science, AI & Development**, Coursera, October 2025
- **Data Science: R Basics**, HarvardX, May 2025
- **Alberta Food Safety Basics**, University of Alberta Health Service, February 2025
- **GCP for Clinical Trials with Investigational Drugs and Biologics (ICH Focus)**, Collaborative Institutional Training Initiative (CITI Program), December 2024
- **Biomedical Responsible Conduct of Research**, Collaborative Institutional Training Initiative (CITI Program), January 2024
- **Conflicts of Interest**, Collaborative Institutional Training Initiative (CITI Program), December 2023
- **Biomedical Investigators and Key Personnel**, Collaborative Institutional Training Initiative (CITI Program), December 2023

Workshops & Trainings

- **Complex Biosystems Seminar Series**, University of Nebraska-Lincoln. (September 2025 - Present)
- **Nebraska Food for Health Center (NFHC) Seminars**, Nebraska Food for Health Center. (August 2024 – Present)
- **High Performance Computing for Researchers**, Holland Computing Center, University of Nebraska-Lincoln. (June 6th – 26th, 2025)
- **Exploring Your Personal Approach to Leadership, Collaboration, and Well-Being**, Clifton Strengths Institute. (January 2025 – April 2025)
- **Professional Food Science Communication**, Department of Food Science and Technology. (January 2025 – May 2025)
- **Grant Writing Seminar**, University of Nebraska-Lincoln. (March 26, 2025)
- **Food Science and Technology Seminar**, Department of Food Science and Technology, University of Nebraska-Lincoln. (August 2024 – December 2024)
- **Peer Mentorship Program**, Northwest A&F University Psychological Education Association. (January 2021 – February 2021)

PROFESSIONAL MEMBERSHIPS & AFFILIATIONS

1. ASM Branch Membership-Missouri Valley 2025 – Present
2. American Society for Nutrition 2024 – Present
3. American Society for Microbiology 2024 – Present
4. International Scientific Association of Probiotics and Prebiotics Students and Fellows Association (ISAPP-SFA) 2023 – Present

SKILLS

- **Languages:** Mandarin (native), English (fluent)
- **Statistical Methods:** Experimental Design, Multiple Regression Analysis, Multivariate Analysis

- **Programming:** R, SAS, Python
- **Research/Project Management:** EndNote, REDCap, Notion
- **Visual Communication:** BioRender, Adobe Illustrator, Canva