



## DR. NURUL HAWA AHMAD

Food safety, Food microbiology, Process validation, Predictive modeling

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Scopus: *h*-index 10 | Citations: 428

Google scholar: *h*-index 13 | Citations: 608

### ACADEMIC CREDENTIALS

Qualification	Institution	Duration	Specialization
Postdoctoral fellow	Eastern Regional Research Center (ERRC), United States Department of Agriculture (USDA)	2024	Predictive modeling
Doctor of Philosophy in Food Science	Michigan State University (MSU), USA	2020	Food microbiology <i>Dissertation: Utilization of Enterococcus faecium as a Salmonella surrogate in validating thermal processing of low-moisture foods</i>
Master of Science in Halal Products Science	Universiti Putra Malaysia (UPM)	2014	Food hydrocolloids <i>Thesis: Rheological, spectral and thermal analyses of gellan/dextran blends as gelatin substitute</i>
Bachelor of Science in Biotechnology	Rochester Institute of Technology (RIT), New York, USA	2010	Undergraduate project: Quorum sensing in sugarcane- and grape-associated bacteria <i>Business Management (Minor)</i> <i>Communication (Concentration)</i>

## PROFESSIONAL AFFILIATIONS

Organization	Position	Year	Expertise/Role
Food Safety Index Development Committee, Ministry of Health Malaysia	Expert panel	2025	Food safety
Impartiality Committee for Organic Food Certification, Ministry of Health Malaysia	Member	2025	Food safety
USDA Asian Pacific American Network in Agriculture (APANA)	Member	2024 - present	Food microbiology
National Postdoctoral Association, USA	Member	2022-2028	Food microbiology
American Society of Microbiology (ASM)	Postdoctoral member	2024	Microbiology
International Association for Food Protection	Professional member	2020 - 2024	Food microbiology
UPM Academic Staff Association	Member	2021 - present	Food microbiology
Institute of Tropical Agriculture and Food Security, UPM	Interim research associate	2021 - present	Food safety
Halal Products Research Institute, UPM	Interim research associate	2020 - 2022	Halal products science
Southeast Asia for Food Protection (Affiliate of International Association for Food Protection) <a href="#">affiliate view Fall 2019</a>	Member	2019 - 2020	Food microbiology
Low-moisture Pasteurization Alliance <a href="#">homepage</a>	Sub-project leader	2016 - 2020	Food microbiology
Phi Tau Sigma Honor Society of Food Science and Technology- MSU Chapter	Member	2017 - 2019	Food microbiology
International Association for Food Protection	Student member	2016 - 2019	Food microbiology

## AWARDS

Title	Award authority	Award type	Year
Oak Ridge Institute for Science & Education (ORISE) postdoctoral research fellowship	ORISE, USA	International	2022-2024
Finalist Vice-Chancellor Awards (Teaching category)	Universiti Putra Malaysia	University	2022
Dissertation Completion Fellowship	MSU Graduate School	University	2019
1 <sup>st</sup> place Developing Scientist Competition for Poster Presentation in Annual Meeting of IAFP, Salt Lake City, Utah, USA. <a href="#">news</a>	International Association for Food Protection (IAFP), USA	International	2018
The Glenn and Nan Corliss Faculty Exchange to Promote International Graduate Training Endowment	Food Science and Human Nutrition Department, MSU	Department	2018
Sara Lee Endowment Fund for Food Safety in Food Science and Human Nutrition	Food Science and Human Nutrition Department, MSU	Department	2017
Graduate Learning Assistant Fellowship (GLAF)	Food Science and Human Nutrition Department, MSU	Department	2018 2017
Summer travel funding	Food Science and Human Nutrition Department, MSU	Department	2019 2018 2017
Research Invention, Innovation and Design (RIID) - <i>Gold medal</i>	UiTM, Lendu, Alor Gajah, Melaka, Malaysia.	National	2012

Project no.	Project title	Role	Year	Source of fund	Status
USDA-NIFA AFRI-grant 2015-68003-23415	Enhancing low-moisture food safety by improving development and implementation of pasteurization technologies <a href="#">Link to USDA Webpage</a>	Graduate Researcher who: <ul style="list-style-type: none"> <li>Developed experimental design and standardized methodology for surrogate project across 5 institutions: Washington State University, University of Georgia, University of Nebraska-Lincoln, Institute for Food Safety and Health (FDA), Illinois Institute of Technology</li> <li>Managed data collection using standardized data template in Google drive</li> <li>Conducted monthly conference call with collaborators via Zoom</li> </ul>	2015-2022	United States Department of Agriculture (USDA) – 4.7 million USD (~20 million MYR)	Completed
UPM - GP-IPM/2022/9711100	Profiling of heat-resistant <i>Salmonella</i> serotypes using Nanopore, long-read DNA amplicon sequencing during thermal processing of meatless patty model as affected by contamination sources	PI	2022-2026	Universiti Putra Malaysia (35K MYR)	On-going
8072-42000-092-000-D	Advanced methods for predictive modeling of bacterial growth and survival in foods <a href="#">Link to USDA-ARS-ERRC</a>	Postdoctoral fellow	2022-2024	United State Department of Agriculture - Agricultural Research Service (USDA-ARS)	Completed
UPM-GP/2023/9753300	The physical, biochemical, and microbiological properties of powdered Tempoyak produced using optimized controlled fermentation	Co-PI	2023-2025	Undisclosed amount Universiti Putra Malaysia (50K MYR)	On-going
UPM - GP-IPS/2023/9774900	Survival kinetics of <i>Salmonella</i> and <i>E. coli</i> in Edible Bird Nest (EBN) during storage and subsequent thermal inactivation.	Co-PI	2023-2025	Universiti Putra Malaysia (25K MYR)	On-going

UPM-IPS	Development of method for determination of cereulide toxin in raw and cooked rice using QUECHERS – LC-MS/MS and its quantitative risk assessment	Co-PI	2024-2026	Universiti Putra Malaysia (20K MYR)	On-going
UPM-GP	Dynamic modeling and optimization of the plant-based puree fermentation process in various high-quality plant-based cheese production.	Co-PI	2024-2027	Universiti Putra Malaysia (100K MYR)	On-going
UTM	Impact of raw egg storage and <i>Salmonella</i> genomic characteristics on survival of outbreak strains	Co-PI	2024-2027	Universiti Teknologi Malaysia (127,831 MYR)	On-going

#### VISITING LECTURER

##### Institution

Universitas Brawijaya  
Faculty of Fisheries and Marine Sciences

##### Appointment period

Sep – Nov 2025

#### TEACHING EXPERIENCE

##### Collaborative teaching

Course name	Topic	University	Program	Year
Food Safety and Toxicology	Food safety and foodborne illness	UiTM Shah Alam & UiTM Kuala Pilah, Malaysia	Bachelor of Food Science & Technology	2022

##### Universiti Putra Malaysia (UPM)

Course name	Course code	Role	Program	Year
Food Quality Management	FST4612	Instructor	Bachelor of Food Science & Technology	2025
Food quality and standards in food manufacturing industry	FMO4602	Instructor	Bachelor of Food Manufacturing Operation	2024
Food Safety Management	FST5602	Instructor	Master of Food Safety & Quality Assurance, Master of Food Technology	2023
Food Safety Standards and Regulations	FST5606	Instructor	Master of Food Safety & Quality Assurance	2021
Food microbiology	FST5206	Instructor	Master of Food Safety & Quality Assurance	2020
Microbiology and Sanitation in Food Processing	FMO3202	Instructor	Bachelor of Food Manufacturing Operation	2021
Basic food microbiology	FST3201	Instructor	Bachelor of Food Science & Technology	2020, 2021

Introduction to food Science	FST3003	Instructor	Bachelor of Agribusiness, Bachelor of Nutritional Science	2020
Bachelor dissertation	FST4959	Coordinator	Bachelor of Food Science & Technology	2020
Industrial training	FSM4901	Coordinator	Bachelor of Food Science & Technology	2020
Food law and regulations	FST4690	Guest instructor	Bachelor of Science (Food studies)	2020
<b>Michigan State University (MSU)</b>				
Food microbiology	FSC440	Co-instructor	Bachelor of Food Science	2019
Food safety and HACCP	FSC342	Guest instructor	Bachelor of Nutritional Science, Bachelor of Science (Packaging)	2019
Food safety and HACCP	FSC342	Graduate assistant	Bachelor of Nutritional Science, Bachelor of Science (Packaging)	2018 2017
HACCP certification	FSC442	Graduate assistant	Bachelor of Food Science	2018 2017

## RESEARCH PUBLICATIONS

- Journal**
- Dai, L., Wang, X., **Ahmad, N.H.**, Mah, J-H., Qin, W., Wei, X., Liu, S. (2026). Effects of Controlled Water Activity on Microbial Community Succession and Flavor Formation in Low-Salt Chili Mash Fermentation. *Foods*, 15(2), 360. <https://doi.org/10.3390/foods15020360> [Q1]
  - Ahmad, N.H.**, Huang, L., Hwang, C. (2025). Effect of sodium nitrite, sodium chloride, sodium erythorbate, and sodium tripolyphosphate on nontoxigenic *Clostridium botulinum* LNT01 and *C. sporogenes* in growth medium and cooked cured beef – development and validation of critical control surface. *Food Research International*, 214, 116624. <https://doi.org/10.1016/j.foodres.2025.116624> [Q1 Top 10%]
  - Ahmad, N.H.**, Huang, L., Hwang, C. (2024). Growth and No-Growth Boundary of *Clostridium perfringens* in Cooked Cured Meats – A logistic analysis and development of critical control surface in solid growth media, *Food Research International*, 191, 114701. <https://doi.org/10.1016/j.foodres.2024.114701> [Q1 Top 10%]
  - Ahmad, N.H.**, Huang, L., Juneja, V. (2024). One-step analysis of growth kinetics of mesophilic *Bacillus cereus* in liquid egg yolk during treatment with Phospholipase A2: Model development and validation. *Food Research International*, 176, 13786 <https://doi.org/10.1016/j.foodres.2023.113786> [Q1 Top 10%]
  - Huang L., **Ahmad, N.H.**, Juneja, V., Stapp-Kamotani, E., Gabiola, J., Minocha, U., Phillips, R., Hooker, M., Walls, I., Cook, K., Lindsay, J. (2024). Growth kinetics of *Bacillus cytotoxicus* in liquid egg yolk during Treatment with Phospholipase A2 – A dynamic analysis. *Food Microbiology*, 118, 104420. <https://doi.org/10.1016/j.fm.2023.104420> [Q1]
  - Pallianysamy, S., Abdul-Mutalib, N.A., Ungku Zainal Abidin, U.F., Ab Rashid, N.K.M., **Ahmad, N.H.** Home-based Foods in Malaysia – A Food Safety Perspective. *Pertanika Journal of Tropical Agricultural Sciences*, 48, 667-683. [Scopus]
  - Ismail, N.H.S., Mohamed Nawawi, N.I., Ijood, G., Anzian, A., Ismail Fitry, M.R., **Ahmad, N.H.**, Mohamad Adzahan, N., Mohamad Azman, E. (2024). Shelf life and quality assessment of

pasteurised red dragon fruit (*Hylocereus polyrhizus* L.) purée: Comparative study of high-pressure and thermal processing. *International Food Research Journal*, 31(2), 514-529 [Q4]

8. Oslan, S.N.H., Yusof, N.Y., Lim. S.J., **Ahmad, N.H.** (2024). Rapid and Sensitive Detection of *Salmonella* in Agro-Food and Environmental Samples: A Review of Recent Advances in Rapid Tests and Biosensors, *Journal of Microbiological Methods*, 219, 106897 <https://doi.org/10.1016/j.mimet.2024.106897> [Q3]
9. Seritharan, Y., Villegas, B.M., **Ahmad, N.H.** (2024). Sources, persistence, and inactivation of foodborne pathogens in legumes. *Food Research*, 8 (2), 308-321. [https://doi.org/10.26656/fr.2017.8\(2\).231](https://doi.org/10.26656/fr.2017.8(2).231) [Scopus]
10. Christian, A., Miri, T., Onyeaka, H., **Ahmad, N.H.** (2024). Current knowledge on microbiological safety of low-moisture foods - a bibliometric analysis. *Food Research*, 8 (2), 467-488. [https://doi.org/10.26656/fr.2017.8\(2\).277](https://doi.org/10.26656/fr.2017.8(2).277) [Scopus]
11. Jafri, N.I.S., Kumar, R.M., Limcharoenchat, P., Villegas, B.M., Ab Rashid, N.K.M., Meor Hussin, A.S., **Ahmad, N.H.** (2024). Survival kinetics of *Salmonella* Typhimurium oat and pea protein flours. *International Journal of Food*, 1(2), 102-109. <https://doi.org/10.51200/ijf.v1i2.5151>
12. Ng, H. L., **Ahmad, N. H.** (2024). Effect of Temperature on Thermal Resistance of *Salmonella* Typhimurium in Simulated Wheat Gluten-Based Patty. *Journal of Biochemistry, Microbiology, Biotechnology*, 12, 39-41. <https://doi.org/10.54987/jobimb.v12iSP1.937> [MyCite]
13. Khan, S., Rukayadi, Y., Jaafar, A.H., **Ahmad, N.H.** (2023). Antibacterial potential of silver nanoparticles (SP-AgNPs) synthesized from *Syzygium polyanthum* (Wight) Walp. against selected foodborne pathogens. *Heliyon*. e22771 <https://doi.org/10.1016/j.heliyon.2023.e22771> [Q2]
14. Sukarno, N. F., Kalaichevlan, A., Limcharoenchat, P. Abdul Mutalib, N. A., **Ahmad, N. H.** (2023) Thermal and Nonthermal Inactivation of Foodborne Pathogens on Low-Moisture Foods: A Systematic Review. *Journal of Raw Materials and Processed Foods*, 4, 47-67. <https://www.journalrpf.com/index.php/pub/article/view/56/35> [non-indexed]
15. Hussin, M., Anzian A., , Liew, C, Saad, M.Z., , Mula Hasan, B.J.M., Hassan, M., Mohsin, A.Z., Fang, C-M, Saad, M.Z., **Ahmad, N.H.**, Hassan, M., Adnan, H., Meor Hussin, A.S. (2022). Potentially probiotic fermented glutinous rice (*Oryza sativa* L.) with *Lactiplantibacillus plantarum* improved immune system response in a small sample of BALB/cByJ Mice. *Fermentation*, 8, 612. <https://doi.org/10.3390/fermentation8110612> [Q2]
16. **Ahmad N.H.**, Marks B.P., Ryser E.T. Effect of lactose and protein content on thermal resistance of *Salmonella* and *Enterococcus faecium* NRRL B-2354 on dairy powders (2022). *Journal of Food Protection*, 85(12),1865-1874 <https://doi.org/10.4315/JFP-22-111> [Q3]
17. **Ahmad N.H.**, Hildebrandt I. M., Pickens S.R., Vasquez S., Jin Y., Liu S., Halik L. A., Tsai H-C, Lau S.K., D'Souza R.C., Subbiah J., Thippareddi H., Zhu M., Tang J., Anderson N.M., Grasso-Kelley E.M., Ryser E.T., Marks B.P. (2022). Interlaboratory comparison of *Enterococcus faecium* NRRL B-2354 as a *Salmonella* surrogate for validating thermal treatment of low-moisture foods. *Journal of Food Protection*, 85(11), 1528-1552 <https://doi.org/10.4315/JFP-22-054> [Q3]
18. Mohammed, N.K., Ragavan, H., **Ahmad, N.H.**, Meor Hussin, A.S. (2022). Egg-free low-fat mayonnaise from virgin coconut oils. *Foods and Raw Materials*, 10, 76-85. <https://doi.org/10.21603/2308-4057-2022-1-76-85> [Q4]

19. Hao Yuan Chan, Meor Hussin, A. S., **Ahmad, N.H.**, Yaya Rukayadi, Abd-ElAzim Farouk. (2021) Effectiveness of quaternary Ammonium in reducing microbial load on eggs. *Molecules*, 26(17), 5259. <https://doi.org/10.3390/molecules26175259> [Q2]
20. **Ahmad N.H.**, Marks B.P., Ryser E.T. (2019) Effect of talc as a dry-inoculation carrier on thermal resistance of *Enterococcus faecium* NRRL B-2354 in almond meal. *Journal of Food Protection*, 82(10), 1110-1115. <https://doi.org/10.4315/0362-028X.JFP-18-543>. [Q3]
21. **Nurul Hawa, A.**, Jasim Ahmed, Dzulkifly, M.H., Yazid, A.M., Shuhaimi, M. (2015) Oscillatory and steady shear rheology of gellan/ dextran blends. *Journal of Food Science and Technology*, 52(5), 2902–2909. [Q2]
22. Han Ming Gan, Huan Yau Gan, **Nurul H. Ahmad**, Nazrin A. Aziz, Andre O. Hudson, Michael A. Savka (2015) Whole genome sequencing and analysis reveal insights into the genetic structure, diversity and evolutionary relatedness of *luxI* and *luxR* homologs in bacteria belonging to the *Sphingomonadaceae* family, *Frontier in Cellular and Infection Microbiology*, 4, 30-43. [Scopus]
23. **Ahmad, N.H.**, Mustafa, S., Che Man, Y.B. (2015). Microbial polysaccharides and their modification approaches: a review. *International Journal of Food Properties*, 18, 332-347. [Q3]
24. Hudson A.O., **Ahmad N.H.**, Van Buren R., Savka M.A. (2010). Sugarcane and Grapevine Endophytic Bacteria: Isolation, Detection of Quorum Sensing Signals and Identification by 16S v3 rDNA Sequence Analysis. In Current Research, Technology and Education Topics in Applied Microbiology and Microbial Biotechnology, Antonio Mendez Vilas (ed) pp. 801-806.

#### Chapter in Book

1. Azman, E.A., **Ahmad, N.H.\***, Ijood, G., Mazón-Villegas, B., Cortés-Muñoz, M. (2026). High-pressure Processing of Date Products. In Date fruits and by-product processings volume I. Ibrahim, S.A., Mohammad, Z.H., Ahmad, F. (Eds.) <https://doi.org/10.1007/978-3-032-05284-1>
2. Miri, T., **Ahmad, N.H.** Microbes in Agriculture and Food Production. In Green Microbiology: Sustainability, Climate Change, Food and Water. Akinsemolu, A. A. & Onyeaka, H. (Eds) Academic Press. UK pp. 15-29
3. **Ahmad, N.H.\***, Rukayadi, Y., Khan, S., Parmin, N.A., Ahmad Nizar, N.N., Mohammad, Z.H. (2025). Nanotechnology in Food Safety and Preservation. In Innovative Food Processing and Packaging Technologies: The Present and Future. Bermudez-Aguirre, D. (Ed.) Academic Press. UK pp. 233 – 278 <https://doi.org/10.1016/B978-0-323-91742-1.00015-5>
4. **Ahmad, N.H.** (2024). Roles of Biotechnology in Environmental Monitoring in the Food Industry. In Microbial Biotechnology in Food Industry: Advances, Challenges, and Potential Solutions. Ahmad, F., Mohammad, Z.H., Ibrahim, S.A., Zaidi, S. (Eds.) Springer, Cham. pp. 153-165 [https://doi.org/10.1007/978-3-031-51417-3\\_7](https://doi.org/10.1007/978-3-031-51417-3_7)
5. Suresh, S. Mohd Zaini, N.S., Abd Rahim, M.H., **Ahmad, N.H.\*** (2023). Insects and Worms as an Alternative Protein Source in the Halal Food Industry. In Innovation of Food Products in Halal Supply Chain Worldwide. Ahmad Nizar, N.N., Zainal Abidin, S.A.S, Bujang, A. (Eds.). Academic Press. UK. p. 127-144. [Gourmand 2023 – Food Professional Book Award]
6. Halim-Lim, S.A., **Ahmad, N.H.** Hasnan, N.Z.N. (2023). Quality and Safety in the Food Industry. In Wiley StatsRef: Statistics Reference Online. N. Balakrishnan, T. Colton, B. Everitt, W. Piegorsch, F. Ruggeri and J.L. Teugels (Eds.) <https://doi.org/10.1002/9781118445112.stat08389>

7. **Ahmad, N.H.**, Mustafa, S. (2014). Polisakarida daripada sumber mikoorganisma sebagai gantian gelatin haiwan haram. In Isu Halal Kontemporari. Rahman, R.A., Dueraseh, N., Jamaludin, A.I. (Eds). Universiti Putra Malaysia, Serdang, pp. 63-78

#### CONFERENCE – Oral

1. Effect of temperature on *Salmonella* Typhimurium in simulated wheat-based patty. Food Science and Technology Undergraduate Colloquium (FoSTUC), 27-28 February 2024. Malaysia 2024
2. *Salmonella* survival in oat flour as affected by temperature. Food Science and Technology Undergraduate Colloquium (FoSTUC), 27-28 February 2023. Malaysia. Bronze award 2023
3. Thermal and nonthermal processing for low-moisture foods: A systematic review. FENETT 4 April 2022. Thailand 2022
4. Microbiological safety of edible insects and worms. FENETT 4 April 2022. Thailand 2022
5. Validation of *E. faecium* as a *Salmonella* surrogate in the isothermal treatment of almond meals. Annual Meeting of International Food Protection (IAFP), Tampa, FL, USA [fully funded] 2017
6. Validation of *E. faecium* as a *Salmonella* surrogate in the isothermal treatment of low-moisture foods. USDA NIFA AFRI CAP PD/co-PD Meeting for Enhancing Food Safety through Improved Processing Technologies. Tampa, FL, USA 2017
7. Validation of *E. faecium* as a *Salmonella* surrogate in the isothermal treatment of almond meals. Industry Advisory Group Meeting, Institute for Food Safety and Health, Bedford Park, IL, USA [fully funded] 2017
8. Human Nutrition Seminar, Michigan State University, MI, USA
9. Food/Animal Seminar, Michigan State University, MI, USA 2017
10. *Salmonella* in low-moisture foods. Postgraduate colloquium, Malaysian Embassy, Courtyard Marriot Hotel, Glenview, IL 2016
11. Quorum Sensing in Sugarcane- and Grape-associated Bacteria, Rochester Academy of Science, NY, USA 2009

#### CONFERENCE – Poster

1. Effect of sodium chloride, sodium erythorbate, sodium tripolyphosphate, sodium nitrite on *Clostridium perfringens* in cooked cured meat – A Logistic Analysis and Development of Critical Control Surface. Annual Meeting of International Food Protection (IAFP), Long Beach Convention Center, CA, USA [fully funded] 2024
2. Growth of thermotolerant and mesophilic *Bacillus cereus* in liquid egg yolk during treatment of Phospholipase A2. Annual Meeting of International Food Protection (IAFP), Long Beach Convention Center, CA, USA [fully funded] 2024
3. Effect of sugar compositions on *Salmonella* and *Enterococcus faecium* NRRL B 2354 survivor resuscitation using skim milk powder and lactose free milk powder as low moisture food models. Virtual Annual Meeting of International Food Protection (IAFP), USA. 2020
4. *Enterococcus faecium* NRRL B-2354 as a *Salmonella* surrogate in validating thermal treatment of dairy powders with different lactose and milk protein compositions. USDA NIFA AFRI CAP PD/co-PD Meeting for Enhancing Food Safety through Improved Processing Technologies, Kentucky Convention Center, Louisville, KY, USA [fully funded] 2019
5. *Enterococcus faecium* NRRL B-2354 as a *Salmonella* surrogate in validating thermal treatment of dairy powders with different lactose and milk protein compositions. Annual Meeting of International Food Protection (IAFP), Louisville, KY, USA [fully funded] 2018
6. Validation of *E. faecium* NRRL B-2354 as *Salmonella* surrogate in the isothermal treatment of date paste at 0.65<sub>aw</sub>. Annual Meeting of International Food Protection (IAFP), Salt Lake City Convention Center, UT, USA [fully funded] 2018
7. Effect of talc on thermal resistance of *E. faecium* NRRL B-2354 in almond meal at 0.45<sub>aw</sub>. Annual Meeting of International Food Protection (IAFP), Salt Lake City Convention Center, UT, USA [fully funded] 2017
8. Validation of *E. faecium* as *Salmonella* surrogate in the isothermal treatment of almond meal, Annual Meeting of International Food Protection (IAFP), Tampa Convention Center, FL, USA [fully funded] 2017

9. Validation of *E. faecium* as *Salmonella* surrogate in thermal treatment of almond meal. 1<sup>st</sup> International Scholar Showcase, Michigan State University, USA 2013
10. Molecular Interaction of Gellan/Dextran using Thermal and Spectral Analyses, International Congress of Malaysian Society Microbiology (ICMSM), Langkawi, Malaysia [fully funded] 2012
11. Potential of Microbial Polysaccharides as Halal Food Hydrocolloids, Malaysia Technology Expo (MTE). Putra World Trade Center, Malaysia [fully funded] 2009
12. Potential of Microbial Polysaccharides as Halal Food Hydrocolloids, Research Invention, Innovation and Design (RIID), UiTM, Lendu, Malaysia [fully funded]
13. Quorum Sensing in Sugarcane- and Grape-associated Bacteria. 18<sup>th</sup> Summer Undergraduate Research Symposium, Rochester Institute of Technology, NY, USA

#### WORKSHOP – for research skill advancement

1. How to Specify a Statistical Model, USDA-ARS-ERRC, Wyndmoor, PA, USA 2024
2. Applied Root Cause Analysis: Using Your Results to Effectively Manage Risk, Food Safety Magazines. 2024
3. Introduction to MATLAB software. Michigan State University, MI, USA 2017
4. Validating Pasteurization Processes for Low-moisture Products, Tampa, FL, USA 2017
5. Introduction to research design for R software, Michigan State University, MI, USA 2015
6. GeneQuence Kit for *E. coli* detection by Neogen, Michigan State University, USA 2015
7. Bengkel Pemurnian Draf Manuskrip IPPH, Institut Penyelidikan Produk Halal, Hotel Residence, UNITEN, Malaysia 2013
8. Bioreactor Operation Fermentation Technology Unit, Institute of Bioscience, Universiti Putra Malaysia 2011

#### WEBINAR/SEMINAR – Organizer

1. From sequencing to solutions: The role of microbiome profiling in the modern food science. Speaker: Dr. Han Ming Gan (Patriot Biotech Sdn. Bhd.) 2025
2. Advanced method in predictive modeling for food safety Speaker: Dr. Lihan Huang, Eastern Regional Research Center, Agricultural Research Service, USDA ([report](#)) 2024

#### WEBINAR/SEMINAR – Invited speaker

##### International

1. Microbiological spoilage and safety of fish and fish products 2025
2. Growth and no-growth boundaries of spore-former foodborne pathogens in meat and egg products. 7th IUMS International Unions of Microbiological Societies at Faculty of Agricultural Technology, 21-22 August 2025. Indonesia 2024
3. Microbiological predictive modeling for food safety risk assessment: State of the art and way forward. RIT Georgia Gosnell Fall Seminar Series, College of Science, Rochester Institute of Technology, Rochester, NY, USA (travel grant) 2024
4. Growth kinetics and boundary of foodborne pathogen spore-formers in egg and meat products. Eastern Regional Research Center, United States Department of Agriculture (USDA), PA, USA. 2024
5. Enhancing low-moisture food safety via process validation & Methods of Microbiological & Physicochemical of Foods. Brawijaya University. Indonesia (Virtual) 2024
6. *Salmonella* survival kinetics in plant-based products. Future Foods: Trend and Impacts. Walailak University. Thailand (Virtual) 2022  
Host: Prof. Manat Chaijan
7. Validating pathogen control in low-moisture foods. Recent Updates in Food Research and Innovation. Walailak Research Convention 2022. Thailand (Virtual)  
Host: Prof. Manat Chaijan

##### National

1. Kursus keselamatan dan pengendalian makanan. UPM 2025

2. Why food safety is a big deal? Universiti Malaysia Sabah 2023
3. Systematic and narrative review, Polytechnic Nilai, Seremban 2021
4. Validating thermal inactivation of *Salmonella* in low-moisture foods. Institute of Nano Electronic Engineering (INEE), Universiti Malaysia Perlis 2021

#### WEBINAR/SEMINAR – Attendee

1. Joint Academic Microbiology Seminars Kuala Lumpur, Conezion, Putrajaya 2025
2. Applied Root Cause Analysis: Using Your Results to Effectively Manage Risk - Food Safety Summit 2024
3. Safety Issues in Laboratory Decontamination and Sterilization Techniques - USDA 2024
4. Using the Science of Mentorship to Optimize Your Mentoring Relationships - ORISE, USA 2024
5. Hazard Waste Management 2024 - USDA 2024
6. USDA Anti-harassment Training 2024 - USDA 2024
7. Sexual Harassment Training 2023 - USDA 2023
8. Hazard Communication (HAZPOWER) Training 2023 - USDA 2023
9. USDA Records Management 2023 - USDA 2023
10. Unconscious Bias Training 2023 - USDA 2023
11. Workplace Violence Training 2023, USDA 2023
12. Imposter Thoughts and Fears – Changing the Narrative to Advance Your Career Development - ORISE, USA 2023
13. Academic mentoring - CADE, UPM 2023
14. Introduction to Risk-based approaches in Food Safety - Purdue University, USA 2023
15. USDA Information Security Awareness Training and Rules of Behavior - USDA 2022
16. Protecting Personally Identifiable Information (PII) training - USDA 2022
17. USDA Records Management 2022 - USDA 2022
18. The Mirror Dialogue: Women in Science - USDA 2022
19. Food Safety Management course – Ministry of Agriculture, Forestry, and Fisheries, Japan 2021
20. Online assessment clinic – CADE webinar, UPM 2021
21. Conducting e-assessment via online examination – CADE Webinar, UPM 2020
22. Establishing video - CADE webinar, UPM 2020
23. Teaching and learning using social media – CADE webinar, UPM 2020
24. Google Meet – CADE webinar, UPM 2020
25. Online Teaching by Prof. Karim Alias – FB online 2020
26. Write winning grant proposal, Michigan State University, USA 2020
27. Citation Management – Mendeley, Michigan State University, USA 2016
28. Time Management for Graduate Student, Post-Doc and Faculty, Kellogg Hotel, Michigan State University, USA 2015
29. Navigating the Ph.D. : Writing processes and strategic academic writing, Michigan State University, USA 2015
30. Navigating the Ph.D. : Managing time and academic relationship, Michigan State University, USA 2015
31. Halal Scientific Awareness Seminar: A day course on Halal Technology, Technology Park, Malaysia 2013

## ADMINISTRATION DUTIES

Program/Committee/Event	Role	Tenureship
<b>University level</b>		
Career coach representative	Coordinator	Sep 2025 – Sep 2027
International Halal Conference for Research and Technical 2021 (Ihcret2021)	Session chair	11 Nov 2021
<b>Faculty level</b>		
Professional Courses	Instructor	2025 - present
Food Innovation Challenge	Protocol committee	2025
Open Day	Activity committee	2025
Master of Food Safety & Quality Assurance	Program coordinator	Oct 2020 – Aug 2022
Curriculum revision committee for Master of Food Safety & Quality Assurance (MoFS)	Leader	Oct 2021 – Aug 2022
Postgraduate studies committee	Member	Jan 2021 - Dec 2022
Academic & students' activities advisor	Member	Jan 2021 - Dec 2022
Quality Assurance committee	Member	Jan 2021 - Dec 2022
Survey Research Design Seminar	Member	2020
<b>Department level</b>		
Curriculum revision committee of Master of Food Safety and Quality Assurance	Member	2025 - present
Curriculum revision committee of Bachelor of Food Science & Technology	Member	2025 - present
Curriculum revision committee of Bachelor of Science Food Manufacturing Operation	Member	2025 - present
Massive Open Online Course (MOOC) for Master program prerequisite course	Member	2023 - present
Curriculum revision committee of Bachelor of Food Science & Technology	Member	2020 - 2022
Curriculum revision committee of Bachelor of Science Food Studies	Member	2020 - present

## PROFESSIONAL SERVICES

### Editorial board member

Journal of Food Protection (Elsevier)	2026 - 2028
Discover Food (Springer Nature)	2026 - present
International Journal of Food (MyJurnal)	2024 - present

### Board of reviewing editors

Microbiology spectrum	2024 - 2027
SustainE journal	2023 - present

### Journal/Conference/Proceeding Reviewer

5th International Conference on Science, Technology and Innovation (ICSTI 2025), Maejo University - 2025
3 <sup>rd</sup> International Food Research Conference 2024 (IFRC) UPM - 2024
Food Research International - 2023
Trends in Food Science & Technology - 2023
Heliyon - 2023
Food Control – 2022,2023,2024, 2025
LWT- Food Science – 2023,2024

Food Research - 2022

Malaysian Journal of Science Health & Technology - 2021

Journal for Food Protection – 2016,2018,2020, 2025

Jordan Journal of Biological Science - 2020

International Halal Science Conference (IHASC) - 2023

Virtual International Halal Science Conference (VIHASC'21) - 2021

5th International Conference on Green Chemical Engineering and Technology 2021 (GCET)

#### External thesis examiner

Student	Project	Program	Institution	Year
Mohamad Zharif Zulkarnail	Differentiation of L-Cysteine sources by using spectroscopy techniques.	Msc. (Halal Industry Science)	International Institute for Halal Research and Training (INHART), IIUM	2021

#### Assistant Chairman for Postgraduate Viva

(Prepare reports summarizing comments from internal and external examiners during Viva voce)

Student	Title of thesis	Supervisor	Program	Year
Lee Epeng	Prevalence, antibiogram and molecular characterization of extended-spectrum Beta-Lactamase (ESBL) producing <i>Escherichia coli</i> in lettuce and bean sprouts	Dr. Azira Abd Mutalib	Master of Food Safety	2022
Fernando Hewage Ranjith Piyasiri	Development of lacto-fermented fungal growth inhibitor coating to extend the shelf life and enhance the quality of mango ( <i>Mangifera indica</i> L.).	Assoc. Prof. Anis Shobirin Meor Hussin	Ph.D. in Food Technology, FSTM	2022
Farah Salina Hussin	Enhancement of GABA production by <i>Lactobacillus plantarum</i> TAJ-APIS362 in yogurt	Prof. Nazamid Saari	Master of Food Biotechnology, FSTM	2021
Anis Asyila Marzlan	Assessment of antibacterial and antioxidant properties of torch ginger ( <i>Etlingera elatior</i> Jack) inflorescence essential oil in starch-based edible film for chicken meat packaging	Assoc. Prof. Anis Shobirin Meor Hussin	Master of Food Technology, FSTM	2021
Salar Kadhum Ali	Antimicrobial activity, phytochemical and toxicity analysis of <i>Syzygium jambos</i> L. Alston leaves extraction and its application in food	Assoc. Prof. Yaya Rukayadi	Ph.D. in Molecular Biology and Genetic Engineering	2021
Rafeikh Faekhlai	Impact of sugar and acid adulteration on the safety of honey produced by <i>Apis mellifera</i> and <i>Heterotrigona itama</i> bee	Prof. Dr. Jinap Selamat	Ph.D. in Food Safety	2021
Raditia Najmi Fathurrahman	Microbiological safety of salmon Nigiri sushi and food safety culture assessment in the	Assoc. Prof. Maimunah Sanny	Master of Food Safety	2021

selected Japanese chain  
restaurant

#### INDUSTRY-BASED OUTREACH

Company/Institution	Project title	Role	Year
JMM Cookies Sdn Bhd Muar Johor	Food safety training	Trainer	2025
Bangladesh Institute of Food Science and Technology	Basic microbiological training	Co- trainer	2022
GeneSeq Sdn. Bhd.	Next-Generation Sequencing in Food Safety Seminar by Dr. Han Ming Gan	Leader	2020

#### COMMUNITY-BASED OUTREACH

Company/Institution	Project	Role	Year
SK Sri Serdang	Makan selamat, Masa Depan Lestari (geran KTGS)	Food safety Trainer	2025
Vocational college (Agriculture) Teluk Intan	Basic food microbiology – microbial classification and enumeration	Trainer	2025
Polytechnic Nilai, Negeri Sembilan	Systematic and narrative review writing for Diploma Students	Speaker	2021
Sek Men Syed Ibrahim, Pendang, Kedah	Career talk – Food Science and Technology to Form 5 students	Speaker	2020
Islamic Center of Greater Lansing, MI, USA	Taught beginner Arabic (weekly)	Teacher	2018

#### SUPERVISION – POSTGRADUATE & UNDERGRADUATE

Student	Project title	Program	Status
<b>PhD : Co-supervisor</b>			
Muhammad Alrazi Ahmad Nor Komar	Nutmeg [ <i>Myristica fragrans</i> houtt.] leaf extract mediated green synthesis of silver nanoparticles (nl-agnps) and its enhanced antimicrobial and antispore properties	Food Safety	Active
Sadeeya Khan	Serai kayu [ <i>Syzygium polyanthum</i> (WIGHT) WALP.] leaves extract mediated green synthesis of silver nanoparticles (AgPNs) and its enhanced antimicrobial and antispore properties	Food Safety	Completed
Muhaini Mohd Hussain	Immunomodulatory effects of tapai pulut ( <i>Oryza Sativa</i> L.) improved by the inclusion of probiotic starter culture	Food Biotechnology	Active
Nor Faziey Aini Sukarno	Survival kinetics of <i>Salmonella</i> and <i>E. faecium</i> in edible bird nest during storage and thermal inactivation	Food Safety	Active

Sharmili Kuppan	Method development for the determination of cereulide toxin in raw and cooked rice using Quechers technique and liquid chromatography tandem mass and risk assessment	Food Safety	Active
Pan Wanyu	Antibacterial Effect of Green Synthesis of Silver Nanoparticle using Cinnamon Bark Extract Against Multi-Drug Resistance Bacteria in Freshwater Fish	Food Safety	Active
Lee Epeng	Prevalence of <i>Salmonella</i> spp. and <i>Vibrio</i> spp. in Seafood and the Development of Microbial Risk Assessment Model for Food Safety Risk Analysis.	Food Safety	Active

#### Master by research : Supervisor

Subashini Pallianysamy	Food Safety Knowledge, Attitude, Practices (KAP) among Home-Based Food Operators in Klang Valley correlated with microbiological safety of Home-Based products	Food safety	Active
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#### Master by research : Co-supervisor

Idris Fadheelah Biola	Comparison between dried chili and chili paste in Selangor, Malaysia on the production of aflatoxigenic <i>Aspergillus parasiticus</i> with its molecular characterization	Food safety	Active
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#### Master by Coursework : Supervisor

Chai Ming Huah	Effect of food matrix composition on the thermal resistance of <i>Salmonella</i> spp. in a simulated plant-based patty	Food Safety	Completed
Nor Faziey Aini Sukarno	Thermal and nonthermal processing for low-moisture foods: A systematic review	Food Safety & Quality Assurance	Completed

#### Bachelor : Supervisor

Izzhani Sofea Najwa Izzudin	Growth kinetics of <i>Salmonella</i> in onion as affected by pineapple vinegar concentrations	Food Science & Technology	Completed
Nurul Izzati Mohd Nor	Growth kinetics of <i>Bacillus cereus</i> in rice milk as affected by storage temperature	Food Science & Technology	Completed
Nurul Afiqah Md Lazim	Survival kinetics of <i>Salmonella</i> in melon puree during heat treatment	Food Studies	Completed
Nur Anis Shazleena Zulkefle	Growth of <i>Salmonella</i> in palm milk as affected by storage temperature	Food Science & Technology	Completed
Nurul Safwani Jaffridin	Thermal resistance of <i>Salmonella</i> Typhimurium in soy-based patty	Food Science & Technology	Completed
Aina Wafi Ahmad Azan	Thermal resistance of <i>Salmonella</i> Typhimurium in pea-based patty	Food Science & Technology	Completed
Ng Hui Lin	Thermal resistance of <i>Salmonella</i> Typhimurium in wheat-based patty	Food Science & Technology	Completed
Nur Iman Jafri	Survival of <i>Salmonella</i> in oat flour as affected by storage temperature	Food Science & Technology	Completed
Ramhyaa	Survival of <i>Salmonella</i> in pea protein powder as affected by storage temperature	Food Science & Technology	Completed
Nor Alya	Survival of <i>Salmonella</i> in onion powder as affected by storage temperature	Food Science & Technology	Completed
Suganisha Suresh	Microbiological safety of edible insects and worms (review)	Food Science & Technology	Completed
Yukashiny Seritharan	Microbiological safety of legumes (review)	Food Science & Technology	Completed

Priyanka Vegananda      Effect of thermal and nonthermal processing on food nutrient (review)      Food Studies      Completed

No. of PhD students		No. of Master students (Research)		No. of Master students (Coursework)
Supervisor	Co-Supervisor	Supervisor	Co-Supervisor	Supervisor
0	6	1	1	2

## REFERENCES

Name	Role	Position	Affiliation	Address	Contact information
Lihan Huang	Postdoctoral supervisor	Dr.	Research Leader, Microbial & Chemical Food Safety, Eastern Regional Research Center (ERRC), <b>USDA</b>	Eastern Regional Research Center (ERRC), East Mermaid Lane, Wyndmoor, Pennsylvania, USA 19038	Tel: (+1) 215 233 6621 lihan.huang@usda.gov
Anis Shobirin Meor Hussin	Dean	Professor	Faculty of Food Science & Technology <b>Universiti Putra Malaysia</b>	106, Food 1, Faculty of Food Science & Technology, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia	Tel: (+6)03-9769 8347 shobirin@upm.edu.my
Elliot T. Ryser	Major advisor (Ph.D.)	Professor (Emeritus)	Department of Food Science and Human Nutrition <b>Michigan State University</b>	236B G.M. Trout Building 469 Wilson Rd East Lansing, MI, USA 48824	ryser@msu.edu
Bradley P. Marks	Principal investigator USDA NIFA AFRI 2015	Professor	Department of Biosystem Engineering <b>Michigan State University</b>	524 S. Shaw Lane, 210 Farrall Hall, Michigan State University, East Lansing, MI, USA 48824	Tel: (+1)517 432 7703 marksbp@msu.edu