MOHAMMAD ZAREI (Ph.D.)

Virginia Seafood AREC, Virginia Polytechnic Institute and State University, Hampton, VA 23669, USA

✉ mzarei.mail@gmail.com | ☎ +1-(479)-316-1204

✉mzarei@vt.edu | ☎ +1-(757)-727-4861

With over 14 years of proven success in the research and education sector, I have established myself as a top-performing academic with expertise in food science and technology, alternative proteins, and functional foods. During my academic career, I gained extensive experience in teaching, student supervision, and scientific research and have since developed innovative training courses and teaching methodologies. My track record includes securing research grants and funds, authoring 50 papers in highly-ranking and peer-reviewed international journals, publishing 4 book chapters, and presenting at more than 10 conferences. I am proud to have received multiple awards for my contributions to the field, and I hold 2 patents for my work in developing new food products. As a self-motivated and organized professional, I excel at spearheading substantive research initiatives that push the boundaries of our understanding of food science. I am passionate about mentoring students and fostering their growth and development as they prepare to make their own contributions to the field. Overall, I am confident in my ability to make significant contributions to any research or education team, and I look forward to the opportunity to put my skills to work in a challenging and dynamic environment.

Professional Strengths

Scientific Research	Syllabus Design	Faculty Administration
Experiment Designs	Assessments & Examinations	Learning & Teaching Plans
Research Funding	Scientific Journal Preparation	Students' Affairs Management
Mentoring & Guidance	Laboratory Management	Students Mentorship
Students Supervision	Teaching & Lecturing	

Academic Qualifications

Ph.D. in Food Biotechnology (CGPA: 3.732), University Putra Malaysia (2010 – 2014)
(**Thesis title**: Generation and characterization of bioactive peptides from palm kernel cake proteins)

Master of Science in Food Science & Technology (CGPA: 3.478), University of Tabriz (1997 – 2000)

Bachelor of Science in Food Science & Technology (CGPA: 3.040), Urmia University (1993 – 1997)

Teaching & Research Experience

Research Scientist, Virginia Tech | USA ♦ December 2021 – Present

- ♦ Collaborate with other team researchers and supervise Ph.D. and master's students and postdoctoral researchers.
- ♦ Manage laboratory operations, including equipment maintenance, inventory monitoring, budget management, and workflow control.
- ♦ Prepare high-quality manuscripts, reports, grant proposals, and presentations.
- ♦ Develop new objectives for future experiments to drive innovation in the field.
- ♦ Provide adequate training and mentoring for undergraduate and graduate students.

Research Scholar, University of Arkansas| USA ♦ August 2021 – December 2021

- ♦ Led end-to-end research activities in the field of food science and biotechnology.
- ♦ Assisted in preparing grant proposals for internal and external bodies to secure funding for research.
- ♦ Provided mentorship to both undergraduate and postgraduate students to support their professional growth and development.

Assistant Professor, University Technology MARA (UiTM) | Malaysia ♦ Apr 2019 – July 2021

- ♦ Design and develop syllabus and learning materials for Food Science & Technology courses to improve delivery.
- ♦ Secure funding from internal and external sources to support research projects.

- Assess students in mid and final semesters to monitor their progress.
- Supervise Master's and Ph.D. students in their research projects
- Prepare manuscripts for peer-reviewed journals and present research at scientific conferences.

Postdoctoral Researcher, University Putra Malaysia| Malaysia ♦ Apr 2016 – April 2019

- Led end-to-end research activities in the field of alternative proteins, protein extraction and optimization, protein hydrolysis, and bioactive peptides fractionation and purification, making significant contributions to our understanding of these critical areas.
- Supervised Master's and Ph.D. students in designing and implementing experiments, effectively managing the laboratory, and providing guidance to ensure the success of our research projects.
- Secured funding from internal and external bodies to support our research, leveraging my strong grant writing skills and knowledge of the funding landscape to identify and pursue opportunities for funding.
- Provided effective mentorship to both undergraduate and postgraduate students, helping them to develop their skills and knowledge and prepare for successful careers in research and academia.

Assistant Professor, Azad University | Iran ♦ Feb 2015 – Apr 2016

- Designed syllabus and developed learning materials such as films, laboratory experiments, and slides to enhance the delivery of Food Science & Technology courses.
- Conducted assessments of students in the mid and final semesters to monitor their progress and provide feedback.
- Supervised Master's and Ph.D. students in conducting research projects
- Prepared manuscripts for peer-reviewed journals and presented research at scientific conferences to disseminate findings and receive feedback.

Research Assistant, University Putra Malaysia| Malaysia ♦ Sept 2011 – Jan 2015

- Assisted in teaching the undergraduate course "Laboratory for Chemistry and Technology of Plant and Animal Products" by providing support to the course instructor and grading assignments.
- Provided guidance and assistance to postgraduate students in conducting research projects related to food science and technology. This involved advising on experimental design, data analysis, and manuscript preparation.

Lecturer (Full Time), Azad University | Iran ♦ May 2004 – June 2010

- Designed and developed syllabi and learning materials, such as laboratory experiments and slides, to enhance the delivery of Food Science & Technology courses. This involved incorporating current research findings and emerging trends into course materials to provide students with a comprehensive understanding of the field.
- Conducted assessments of students in the mid and final semesters to monitor their progress and provide constructive feedback on their performance. This involved evaluating their knowledge and skills through exams, assignments, and projects.
- Prepared manuscripts for peer-reviewed journals by conducting in-depth research and data analysis, synthesizing findings, and writing articles for publication. Attended various scientific conferences to present research findings, receive feedback, and network with other researchers in the field.

Lecturer (Part-Time), University of Kurdistan | Iran ♦ Feb 2005 – June 2009

- Taught Food Science & Technology courses to undergraduates.

University Administration Experience

Deputy Dean of Educational & Student Affairs, Azad University | Iran ♦ Nov 2007 – June 2010

- Assisted the Dean in developing, implementing, and monitoring the Faculty of Agriculture & Natural Resources.
- Collaborated with the Associate Pro-Vice-Chancellor (Education), Faculty Executive Committee, and Faculty Academic Committee in developing the Learning & Teaching Plan for the entire faculty.
- Led the comprehensive student advisory system within the faculty and implemented effective mechanisms for managing student inquiries and complaints.

- Supported the Dean in overseeing the overall management of the faculty.
- Acted as the Dean in the Dean's absence and contributed to other Faculty and University-wide committees.

Chairman of Research Affairs, Azad University, Sanandaj Branch | Iran ♦ Apr 2007 – Nov 2008

- Facilitated and promoted high-quality research within the faculty and affiliated entities, while ensuring proper supervision of postgraduate students and laboratory staff.
- Collaborated with research communities within the University to develop shared responsibility for the ethical conduct of research and compliance, enabling greater access to scientific infrastructure for researchers.

Supervising and Mentoring Experience

Graduate Students

- Palak Garg (Master student in Food Science and Technology, 2021-2023)
- Golnaz Hesami (Ph.D. student in Food Science and Technology, 2017-2021)
- Adibah Binti Ali (Ph.D. student in Food Science and Technology, 2018-2022)
- Brisha Arulraja (Ph.D. student in Food Science, 2018-2022)
- Parisa Motamedi (Master student in Food Science and Technology, 2016-2018)
- Fatemeh Naderian (Master student in Food Science and Technology, 2016-2019)
- Shiva Shirini (Master student in Food Science and Technology, 2016-2018)
- Muhammad Ikrami Bin Salehhuddin (Master student in Food Science and Technology, 2019-2020)

Undergraduate Students

- Mentoring almost 30 undergraduate students for preparing the final projects in food science and technology, Department of Food Science and Technology, UiTM and Azad University)

Postdoctoral Researchers

- Mentoring almost 13 postdoctoral researchers in designing their projects and experiments, editing and reviewing their manuscripts, and helping them to run their experiments at University Putra Malaysia, University Technology MARA, as well as at Virginia Tech University, United States

---

Food Industries Experience

Food Industries Inspector and Supervisor, Industries & Mines Organization ♦Dec 2000 – Apr 2004

- Conducted supervision and inspections of food industries throughout Kurdistan province in Iran to ensure the production of high-quality food.
- Monitored food production facilities to ensure compliance with established criteria and standards.

Food Industries Consultant, Saman Kaifyat Kurdistan Company ♦ June 2001 – June 2010

- Implemented HACCP and GMP standards in food factories, ensuring compliance with food safety regulations and best practices.
- Conducted feasibility studies to identify optimal machinery and processes for producing high-quality food products.

Grants & Funds

- **PI**-Submitted- **GFI Grant**- Advancing Sustainable Meat Analog Production: AI-Driven Optimization of Sorghum Protein Extrusion and Characterization- **2024-2026; $350,000.**
- **Co-PI**-Submitted- Texurization of Meat Analogs Fortified with Prebiotics by Novel Grid-based Cooling Dies- **2024-2026; $350.000.**

- **PI-**Approved- **USCP Grant**- Maximizing the Potential of Sorghum Protein Concentrate: A Path to Enhanced Opportunities in Aquafeed and Food Markets-**2024-2026; $217,400.**
- **PI**- Received- **NDC Grant**- Nanobubbles Technology as An Innovative Approach to Mitigate Surface Bacterial Contamination in Dairy Processing Facilities- **2023-2026; $73,509.**
- **PI- Received- USCP Grant**- Value-added Sorghum Protein Evaluation and Development – **2022-2024; $754,000.**
- **PI- Received- USDA-USCP**- Value-added Sorghum Product Development for Aquafeed and Human Food Sectors- **2023-2024- $186,000.**
- **PI**-Received- **GFI Grant**- Development of robust, low-cost differentiation medium for cultured seafood- **2021-2023, $113,636.**
- **Received - FRGS Grant**- Underlying the Functional and Physicochemical Properties of Different Texturized Legume-based Proteins – **2021-2023**
- **Received -FRGS Grant** - Identification, Characterization, and Structure-activity Relationship Study of Enzymatic-generated Bioactive Peptides from Dried Mung Bean Sprouts – **2021-2023**
- **Submitted- University Putra Malaysia Grant -** Pre-commercial scale-up of palm kernel cake protein hydrolysates as bio-ingredient to produce functional food - **2023.**
- **Completed-FRGS Grant-** Exploring the potential of hypoallergenic peptides of goat's milk-derived alpha-s1-casein for reduction of allergen-specific serum binding – **2020-2022**
- **Completed - FRGS Grant -** Assessment of Lacto-fermented peptides derived from kenaf seed proteins as a source of natural antimicrobial agents against a broad range of food spoilage microbes- **2019-2020**.
- **Completed – Geran Putra IPS -** Production and Characterization of Enzymatically Hydrolysis of Whey Protein Concentrate – **2018-2019**
- **Completed – Geran Putra -** Development of textured vegetable protein from mung bean protein isolate and its effect on meat patty quality – **2018-2019**
- **Completed – Geran Putra IPS -** Production of Hydrolysate containing Biopeptides from Kenaf (Hibiscus cannabis) Seed Protein and Their Bioactivities – **2018-2019**
- **Completed - Ministry of Science, Research and Innovation (MOSTI) -** Improving bioavailability of antihypertensive bioactive peptides derived from Actinopyga Lecanora - **2017- 2019.**
- **Completed – UPM Holding for Alo Shafy Company -** Inhibition of Browning Reactions and Stabilization of Colour during Aloe Vera Gel Processing and Storage – **2016-2017.**
- **Completed - Ministry of Higher Education -** Development of an extracellular expression system of glutamate decarboxylase (GAD) using clone-back strategy for continuous high-level GABA production in food systems - **2014-2017.**
- **Completed - Agro-Biotechnology Malaysia (ABI) -** Development of bioactive peptides as food ingredients from high-protein materials – **2011-2015.**
- **Completed –Azad University of Kurdistan, Sanandaj Branch –** Physicochemical properties and nutritional value of some Kurdistan chickpea species – **2008-2009**.
- **Completed - Azad University of Kurdistan, Sanandaj Branch –** Identification and characterization of a traditional Iranian sourdough for flatbread production (OSKOO)-**2008- 2009**

Professional Services

- AOCS **Standard Development Committee Member** on Protein Analysis Methods Development, 2018-2023
- **Guest Editor** of Foods journal titled "Special Issue "Recent Advances in Food-Derived Protein and Bioactive Peptides: Functionality, Applications, and Health Benefits."- 2023.
- **Editorial Board** of IJBST Journals Group- 2021-2023
- **Editorial Board** of Journal of Scientific Letters, 2021-2023
- **Editorial Board** of Journal of Nutrition, Food Research and Technology (JNFRT)- 2018-2023
- **Editorial Board** of International Journal of Advancement in Life Sciences Research- 2021-2023

- International Food Institute (IFT) Member
- American Oils and Chemists Society (AOCS) Member
- American Peptide Society (APS) Member
- European Peptide Society (EPS) Member

Publications

1. **Zarei, M**., Forghani, B; Ebrahimpour, A., Abdul-Hamid, A., Anwar, F., Bakar, R., & Saari, N. **(2015)**. *In vitro* and *in vivo* antihypertensive activity of palm kernel cake protein hydrolysates: sequencing and characterization of potent bioactive peptides. **Journal of Industrial Crops and Products,** 76(0), 112-120.
   http://www.sciencedirect.com/science/article/pii/S0926669015302053
2. **Zarei, M**., Ebrahimpour, A., Abdul-Hamid, A., Anwar, F., Bakar, F.A., Philip, R., & Saari, N. **(2014)**. Identification and characterization of papain-generated antioxidant peptides from palm kernel cake proteins. **Food Research International**, 62, 726-734.
   http://www.sciencedirect.com/science/article/pii/S0963996914002907
3. **Zarei, M**., Ebrahimpour, A., Abdul-Hamid, A., Anwar, F., & Saari, N. (**2012**). Production of defatted palm kernel cake protein hydrolysate as a valuable source of natural antioxidants. **International Journal of Molecular Sciences**, 13(7), 8097–8111.
   http://www.mdpi.com/1422-0067/13/7/8097
4. Forghani, B; **Zarei, M**., Ebrahimpour, A., Jamilah, B., A, bdul-Hamid., & Saari, N. **(2016)**. Purification and characterization of angiotensin converting enzyme -inhibitory peptides derived from *Stichopus horrens*: stability study against the ACE and inhibition kinetics**. Journal of Functional Foods.** 20, 276-290.
   http://www.sciencedirect.com/science/article/pii/S1756464615005228
5. **Zarei, M**., Ghanbari, R; Tajabadi, N; Abdul-Hamid; F., Bakar, F; & Saari, N. (**2015**) Generation, fractionation and characterization of iron-chelating protein hydrolysate from palm kernel cake proteins. **Journal of Food Science.** 81(2), C341-C347**.**
   http://onlinelibrary.wiley.com/doi/10.1111/1750-3841.13200/full
6. Ghanbari, R; **Zarei, M;** Ebrahimpour, A; Abdul Hamid, A; Ismail, A; Saari, N. **(2015).** Angiotensin converting enzyme (ACE) inhibitory and anti-oxidant activities of sea cucumber (*Actinopayga lecanora)* proteolysates. **International Journal of Molecular Sciences.** 16(12), 28870-28885**.**
   https://doi.org/10.3390/ijms161226140
7. Ghanbari, R; **Zarei, M;** Ebrahimpour, A; Abdul Hamid, A; Ismail, A; Saari, N. (2016). Purification and characterization of nitric oxide inhibitory peptides from *Actinopyga lecanora* through enzymatic hydrolysis. **Journal of Food Biotechnology.** 30(4), 263-277**.**
   https://doi.org/10.1080/08905436.2016.1234391
8. Auwal, S.M; **Zarei, M**., Abdul-Hamid, A., & Saari, N. (2017). Optimization of bromelain-aided production of angiotensin I-converting enzyme inhibitory hydrolysates from stone fish using Response Surface Methodology. **Marine Drugs.** 15(4), 104.
   http://www.mdpi.com/1660-3397/15/4/104
9. Auwal, S.M; **Zarei, M**., Abdul-Hamid, A., & Saari, N. (2017). Response Surface Optimisation for the Production of Antioxidant Hydrolysates from Stone Fish Protein Using Bromelain. **Evidence-Based Complementary and Alternative Medicine.** 2017,1-10
   https://www.hindawi.com/journals/ecam/2017/4765463/abs/
10. Auwal, S.M; **Zarei, M**., Abdul-Hamid, A., & Saari, N. (2017). Improved In Vivo Efficacy of Anti-Hypertensive Biopeptides Encapsulated in Chitosan Nanoparticles Fabricated by Ionotropic Gelation on Spontaneously Hypertensive Rats. **Nanomaterials,** *7*(12), 421.
    http://www.mdpi.com/2079-4991/7/12/421
11. Brishti, F.H; **Zarei, M**; Muhammad K; Rashedi, I.l F; Shukri, R; Saari, N. **(2017)**. Evaluation of the functional properties of mung bean protein isolate for development of textured vegetable protein**. International Food Research,** 24(4), 1595-1605
    http://www.ifrj.upm.edu.my/24%20(04)%202017/(34).pdf

12. **Zarei, M**; Ahmadi Zenouz, A; Saari, N; Tajabadi, N; Ghanbari, R. **(2017)**. Effect of microwave-assisted extraction on the yield and quality of pectin from apple pomace and lemon peel. **International Food Research, 24(6), 2402-2407**
13. Chay, S. Y., Salleh, A., Sulaiman, N. F., Abidin, N. Z., Hanafi, M. A**., Zarei, M**., & Saari, N**. (2018).** Blood-pressure lowering efficacy of winged bean seed hydrolysate in spontaneously hypertensive rats, peptide characterization and toxicity study in Sprague-Dawley rats**.** ***Food & function****, 9*(3), 1657-1671. https://doi.org/10.1039/C7FO01769C
14. Hanafi, M. A., Hashim, S. N., Chay, S. Y., Ebrahimpour, A., **Zarei, M.**, & Saari, N. **(2018)**. High angiotensin-I converting enzyme (ACE) inhibitory activity of Alcalase-digested green soybean (Glycine max) hydrolysates. **Food Research International**, 106, 589-597 https://doi.org/10.1016/j.foodres.2018.01.030
15. Auwal, S.M; **Zarei, M.**, Abdul-Hamid, A., & Saari, N. **(2018)**. Enhanced physicochemical stability and efficacy of angiotensin I-converting enzyme (ACE) - inhibitory biopeptides by chitosan nanoparticles optimized using Box-Behnken design. **Scientific Reports**, 8(1), 1044 https://www.nature.com/articles/s41598-018-28659-5
16. Bordbar, S; Ebrahimpour, A; **Zarei, M**; Saari, N. **(2018)**. Alcalase-generated Proteolysates of Stone Fish (Actinopyga lecanora) Flesh as a New Source of Antioxidant Peptides. **International Journal of Food Properties,** 21(1), 1541-15-59 https://www.tandfonline.com/doi/full/10.1080/10942912.2018.1497060
17. Eko Sukohidayat, N., **Zarei, M**., Baharin, B., Manap, M., **(2018).** Purification and Characterization of Lipase Produced by Leuconostoc mesenteroides Subsp. mesenteroides ATCC 8293 Using an Aqueous Two-Phase System (ATPS) Composed of Triton X-100 and Maltitol. **Molecules** 23(7), 1800. http://www.mdpi.com/1420-3049/23/7/1800/htm
18. Auwal, S.M; **Zarei**; **M**., Ching P.T., & Saari, N. **(2018**). Comparative Stability and Efficacy Study of Lipoid S75-Biopeptides Nanoliposome Composite Produced by Conventional and Direct Heating Methods. **International Journal of Food Properties,** 21(1), 2018 https://www.tandfonline.com/doi/full/10.1080/10942912.2018.1504064
19. **Zarei, M**., Abdul-Hamid; A., Muhialdin. J.B., & Saari, N. **(2019).** Relationship between antioxidant capacity and angiotensin-converting enzyme inhibitory activity of papain-generated protein hydrolysates and peptides from palm kernel cake proteins. **International Food Research Journal.** 26(5), 1641-1649 http://www.ifrj.upm.edu.my/26%20(05)%202019/25.pdf
20. Auwal, S.M., Najib, Z.A., **Zarei, M**., Chin, P.T., & Saari, N. **(2019**). Identification, structure-activity relationship and in silico molecular docking analyses of five novel angiotensin I-converting enzyme (ACE)-inhibitory peptides from stone fish (Actinopyga lecanora) hydrolysates. **PLoS ONE**. 14 (5), e0197644 https://doi.org/10.1371/journal.pone.0197644
21. Wazir, H., Chay, Y.S., **Zarei, M**., Farah, S.H., Mustapha, N.A., Wan, Z.W.A, & Saari, N. **(2019**). Effects of Storage Time and Temperature on Lipid Oxidation and Protein Co-Oxidation of Low-Moisture Shredded Meat Products. **Antioxidants**. 8 (10), 486. https://doi.org/10.3390/antiox8100486
22. Muhialdin, B. J., Kadum, H., **Zarei, M**., & Meor Hussin, A. S. (**2020**). Effects of metabolite changes during lacto-fermentation on the biological activity and consumer acceptability for dragon fruit juice. **LWT**, 121, 108992. https://doi.org/10.1016/j.lwt.2019.108992
23. Hussein, F. A., Chay, S. Y., Ghanisma, S. B. M., **Zarei, M**., Auwal, S. M., Hamid, A. A., Saari, N. (**2020**). Toxicity study and blood pressure–lowering efficacy of whey protein concentrate hydrolysate in rat models, plus peptide characterization. **Journal of dairy science**, 103(3), 2053-2064. https://doi.org/10.3168/jds.2019-17462
24. Hussein, F. A., Chay, S. Y., **Zarei, M**., Auwal, S. M., Hamid, A. A., Wan Ibadullah, W. Z., & Saari, N. (**2020)**. Whey Protein Concentrate as a Novel Source of Bifunctional Peptides with Angiotensin-I Converting Enzyme Inhibitory and Antioxidant Properties: RSM Study. **Foods**, 9(1), 64. https://doi.org/10.3390/foods9010064
25. Arulrajah, B., Muhialdin, B. J., **Zarei, M**., Hasan, H., & Saari, N. (**2020**). Lacto-fermented Kenaf (Hibiscus cannabinus L.) seed protein as a source of bioactive peptides and their applications as natural preservatives. **Food Control**, 110, 106969.

https://doi.org/10.1016/j.foodcont.2019.106969

26. **Zarei, M**., Abidin, N. B. Z., Auwal, S. M., Chay, S. Y., Haiyee, Z. A., Sikin, A. M., & Saari, N. (**2019**). Angiotensin Converting Enzyme (ACE)-Peptide Interactions: Inhibition Kinetics, In Silico Molecular Docking and Stability Study of Three Novel Peptides Generated from Palm Kernel Cake Proteins. **Biomolecules**, 9(10), 569. https://doi.org/10.3390/biom9100569
27. Ab Aziz, N. A., Salim, N., **Zarei, M**., Saari, N., & Yusoff, F. M. (**2020**). Extraction, anti-tyrosinase, and antioxidant activities of the collagen hydrolysate derived from Rhopilema hispidum. **Preparative Biochemistry & Biotechnology**, 1-10. https://doi:10.1080/10826068.2020.1789991
28. Brishti, F. H., Chay, S. Y., Muhammad, K., Rashedi, I. F. M., **Zarei, M**., & Saari, N. **(2020)**. Texturized mung bean protein as a sustainable food source: Techno-functionality, anti-nutrient property, in vivo protein quality and toxicity. **Food & function**. https://doi.org/10.1039/D0FO01463J
29. Mohamad Asri, N., Muhialdin, B. J., **Zarei, M**., & Saari, N. **(2020**). Low molecular weight peptides generated from palm kernel cake via solid state lacto-fermentation extend the shelf life of bread. **LWT**, 134, 110206. http://doi:https://doi.org/10.1016/j.lwt.2020.110206
30. Zaharuddin, N. D., Hanafi, M. A., Chay, S. Y., Hussin, F. S., Auwal, S. M., **Zarei, M**., Saari, N. **(2020**). Multifunctional hydrolysates from kenaf (Hibiscus cannabinus L.) seed protein with high antihypertensive activity in vitro and in vivo. **Journal of Food Measurement and Characterization**, 1-12. https://doi.org/10.1007/s11694-020-00663-2
31. Brishti FH, Chay SY, Muhammad K, Ismail-Fitry MR, **Zarei M**, Karthikeyan S, et al. **(2020)**. Effects of drying techniques on the physicochemical, functional, thermal, structural and rheological properties of mung bean (Vigna radiata) protein isolate powder. **Food Research International**.;138:109783. https://doi.org/10.1016/j.foodres.2020.109783
32. Brishti FH, Chay SY, Muhammad K, Ismail-Fitry MR, **Zarei M**, Saari N. **(2021).** Texturized mung bean protein as a sustainable food source: Effects of extrusion on its physical, textural and protein quality. **Innovative Food Science & Emerging Technologies**.;67:102591. https://doi.org/10.1016/j.ifset.2020.102591
33. Brishti FH, Yea CS, Muhammad K, Ismail-Fitry MR, **Zarei M**, Karthikeyan S, et al. **(2020)**. Structural and rheological changes of texturized mung bean protein induced by feed moisture during extrusion. **Food Chemistry**.:128643. https://doi.org/10.1016/j.foodchem.2020.128643
34. Hussin FS, Chay SY, **Zarei M**, Meor Hussin AS, Ibadullah WZW, Zaharuddin ND, et al. **(2020).** Potentiality of Self-Cloned Lactobacillus plantarum Taj-Apis362 for Enhancing GABA Production in Yogurt under Glucose Induction: Optimization and Its Cardiovascular Effect on Spontaneous Hypertensive Rats. **Foods.**;9(12):1826. https://doi.org/10.3390/foods9121826
35. Muhialdin, B. J., Zawawi, N., Razis, A. F. A., Bakar, J., & **Zarei, M**. **(2021**). Antiviral activity of fermented foods and their probiotics bacteria towards respiratory and alimentary tracts viruses. **Food Control**, 108140. https://doi.org/10.1016/j.foodcont.2021.108140
36. Hesami, G., Darvishi, S., **Zarei, M**., & Hadidi, M. (**2021**). Fabrication of chitosan nanoparticles incorporated with Pistacia atlantica subsp. kurdica hulls' essential oil as a potential antifungal preservative against strawberry grey mould. **International Journal of Food Science and Technology**. https://doi.org/10.1111/ijfs.15110
37. **Zarei, M**., Rahimi, K., Hassanzadeh, K., Abdi, M., Hosseini, V., Fathi, A., & Kakaei, K. (**2021**). From the environment to the cells: An overview on pivotal factors which affect spreading and infection in COVID-19 pandemic. **Environmental Research**, 201, 111555. https://doi.org/10.1016/j.envres.2021.111555
38. Bordbar, S., Chay, S., Ebrahimpour, A., **Zarei, M**., & Saari, N. **(2021**). Profiling of antioxidative proteolysate enzymatically hydrolysed from stone fish (Actinopyga lecanora). **International Food Research Journal**, 28(4), 848-859.

39. Arulrajah, B., Muhialdin, B. J., Qoms, M. S., **Zarei, M**., Hussin, A. S. M., Hasan, H., & Saari, N. **(2021)**. Production of cationic antifungal peptides from kenaf seed protein as natural bio preservatives to prolong the shelf-life of tomato puree. **International Journal of Food Microbiology**, 359, 109418. https://doi.org/10.1016/j.ijfoodmicro.2021.109418
40. Wazir H, Chay SY, Ibadullah WZW, **Zarei M**, Mustapha NA, Saari N. Lipid oxidation and protein co-oxidation in ready-to-eat meat products as affected by temperature, antioxidant, and packaging material during 6 months of storage. **Rsc Advances**. 2021;11(61):38565-77. https://doi.org/ 10.1039/D1RA06872E
41. Ab Aziz NA, Salim N, Saari N, Yusoff F, **Zarei M**. Jellyfish Collagen Hydrolysate-Loaded Niosome For Topical Application: Formulation Development, Antioxidant And Antibacterial Activities. **Journal of Sustainability Science and Management**. 2022;17(2):1-17.
42. **Zarei M**, Amirkolaei AK, Trushenski JT, Sealey WM, Schwarz MH, Ovissipour R. Sorghum as a Potential Valuable Aquafeed Ingredient: Nutritional Quality and Digestibility. **Agriculture**. 2022;12(5):669. https://doi.org/10.3390/agriculture12050669
43. Zaharuddin ND, Barkia I, Ibadullah WZW, **Zarei M**, Saari N. Identification, molecular docking, and kinetic studies of six novel angiotensin-I-converting enzyme (ACE) inhibitory peptides derived from Kenaf (Hibiscus cannabinus L.) seed. **International Journal of Biological Macromolecules**. 2022;220:1512-22. https://doi.org/10.1016/j.ijbiomac.2022.09.142
44. Arulrajah, B., Qoms S. M., Muhialdin, B. J., Hasan, H., **Zarei, M**., Hossin A.S.M., Chau D., & Saari, N (2022). Antibacterial and antifungal activity of kenaf seed peptides and their effect on microbiological safety and physicochemical properties of some food models. **Food Control**, 109119. https://doi.org/10.1016/j.foodcont.2022.109119
45. **Zarei M**, Ghanbari R, Zainal N, Ovissipour R, Saari N. Inhibition Kinetics, molecular docking, and stability studies of the effect of papain-generated peptides from palm kernel cake proteins on angiotensin-converting enzyme (ACE). **Food Chemistry**: Molecular Sciences. 2022:100147. https://doi.org/10.1016/j.fochms.2022.100147
46. Batish I, **Zarei M**, Nitin N, Ovissipour R. Evaluating the potential of marine invertebrate and insect protein hydrolysates to reduce fetal bovine serum in cell culture media for cultivated fish production. **Biomolecules**. 2022;12(11):1697. https://doi.org/10.3390/biom12111697
47. Arulrajah B, Qoms MS, Muhialdin BJ, **Zarei M**, Hussin ASM, Hasan H, et al. Antifungal efficacy of kenaf seed peptides mixture in cheese, safety assessment and unravelling its action mechanism against food spoilage fungi. **Food Bioscience**. 2023:102395. https://doi.org/10.1016/j.fbio.2023.102395
48. Ashaolu, TJ, **Zarei M**, Agrawal H, Kharazmi MS, Jafari SM. A critical review on immunomodulatory peptides from plant sources; action mechanisms and recent advances. **Critical Reviews in Food Science and Nutrition**. 2023:1-17. https://doi.org/10.1080/10408398.2023.2183380
49. Arulrajah B, Qoms MS, Muhialdin BJ, Meor Hussin AS, Hasan H, **Zarei M**, et al. Elucidating the mechanisms underlying the action of kenaf seed peptides mixture against gram-positive and gram-negative bacteria and its efficacy in whole milk preservation. **LWT**. 2023;181:114757. https://doi.org/10.1016/j.lwt.2023.114757
50. Nikkhah A, Rohani A, **Zarei M**, Kulkarni A, Batarseh FA, Blackstone NT, Ovissipour R. Toward sustainable culture media: Using artificial intelligence to optimize reduced-serum formulations for cultivated meat. **Science of The Total Environment**. 2023:164988. https://doi.org/10.1016/j.scitotenv.2023.164988

Book Chapters

1. **Zarei M**, Muhialdin BJ, Hassanzadeh K, Yea CS, Ahmadi R. Enzymatic Hydrolysis of Proteins. Bioactive Peptides from Food: Sources, Analysis, and Functions: CRC Press; 2022. p. 189-208. https://doi.org/10.1201/9781003106524
2. Muhialdin BJ, **Zarei M**, Hassanzadeh K, Yea CS, Ahmadi R. Fermentation Process. Bioactive Peptides from Food: Sources, Analysis, and Functions. 2022:233. https://doi.org/10.1201/9781003106524

3. Hassanzadeh K, Feligioni M, **Zarei M**, Muhialdin BJ, Maccarone R, Corbo M, et al. Bioactive Peptides in Neurodegenerative Diseases. Bioactive Peptides from Food: Sources, Analysis, and Functions: CRC Press; 2022. p. 391-414. https://doi.org/10.1201/9781003106524
4. Yea, C. S., Ahmadi, R., **Zarei, M**., & Muhialdin, B. J. Fractionation and Purification of Bioactive Peptides. In Bioactive Peptides from Food: Sources, Analysis, and Functions (pp. 267-298). CRC Press.

Patents

- Ovissipour R**; Zarei, M;** Batish, I**. (2022).** Hydrolyzed Protein Serum Replacement Compositions**. International Patent Application No. PCT/US2022/049589**
- **Zarei, M**.; Ebrahimpour, A.; Abdul-Hamid, A.; Saari, N. Abubakar, F. (**2019)**. Novel bioactive peptides with antioxidant and angiotensin-converting enzyme inhibitory activity from palm kernel cake. **Grant No: MY-170208-A.**

Awards

- A **UiTM's Top Researcher** of **2020**. Recognized by UiTM Deputy Vice-Chancellor (Research and Innovation)
- **Gold Medal** from National Food Innovation and Product Development (**NFIPD 2019**), **Malaysia**
- **Gold Medal** from Invention, Innovation and Design Exposition **(IIDEX 2019), Malaysia**
- **First Prize** from the Conference Paper Presentation "Fabrication and characterization of nanoliposome encapsulated ACE-inhibitory biopeptides using lipoid S75 by thin lipid film hydration method**", International Food Research Conference (IFRC 2017), Malaysia**
- **Gold Medal** from International Invention, Innovation and Design Exhibition **(IID 2017)**
- **Silver Medal** from International Invention, Innovation and Technology Exhibition **(ITEX 2013)**.
- **Silver Medal** from the exhibition of Invention, Research and Innovation Malaysia (**PRPI 2012).**
- One of the **selected Top Researchers** in Kurdistan province of Iran (**2003)** among all the academic and non-academic organizations.

National Standards Development & Design

- Chairman of the committee for standard design and development- National standard "**Fruits and vegetables- Canned chestnuts and canned chestnut puree- Specifications and test methods**"- No. 7210
- Chairman of the committee for standard design and development- National standard "Gum**- Guidance for establishing the system of hazard analysis of critical control points (HACCP)- Code of practice**"- No. 7573
- Member of the committee for standard design and development- National standard "**Cereals and cereal products- Code of hygienic practice for plants of confectionary products"-** No. 6757

Conference Presentations

- **Zarei, M., Schwarz, M, Ovissipour,** R. **2023**. Extraction Yield, Amino Acid Composition, And Functional Properties Of Protein Extracted from Sorghum by Alkaline And NaOH-Ethanol-Reducing Agent (NER) Methods. **Aquaculture America 2023**; **New Orleans**, **United States**

- **Zarei, M**., Azizah, A., Nazamid S**. 2019.** Palm Kernel Cake as A Valuable Source of Antihypertensive Proteolysate and Bioactive Peptides: In Vitro and In Vivo Studies. **International Food Research Conference (IFRC 2019); Putrajaya, Malaysia**
- Shehu, A. M, **Zarei, M**., Ping, T.C., Nazamid S**. 2017.** Characterization of nanoliposome containing stone fish biopeptides and evaluation of its stability and bioavailability under-stimulated gastrointestinal digestion. **Asian Regional Conference on System Biology (ARCSB 2017); Putrajaya, Malaysia**
- Shehu, A. M, **Zarei, M**., Ping, T.C., Nazamid S**. 2017.** Comparative Physicochemical Stability and Bioavailability Study of Nanoliposome-entrapped Angiotensin I-Converting Enzyme (ACE) Inhibitory Biopeptides Prepared by Lipid Film Hydration and Direct Hydration Methods. **The 7th Asian Conference on Colloid and Interface Science (ACCIS 2017), Kuala Lumpur, Malaysia**.
- Shehu, A. M, **Zarei, M**., Ping, T.C., Nazamid S**. 2017.** Fabrication and characterization of nanoliposome encapsulated ACE-inhibitory biopeptides using lipoid S75 by thin lipid film hydration method. **International Food Research Conference (IFRC 2017), Kuala Lumpur, Malaysia.**
- **Zarei, M**., Ebrahimpour, A., Abdul-Hamid, A., Anwar, F., Bakar, R., & Saari, N. **2013**. Multifunctional peptides generated from palm kernel cake proteins. **The 10th Australian Peptide Conference**. **Penang, Malaysia.**
- **Zarei, M**. **2009**.The effect of microwave on extraction yield and pectin quality in apple pomace and lemon peel. **The 5th International Symposium on Food Rheology and Structure**. -14-18 June, **Zurich, Switzerland**.
- **Zarei. M**. **2004**. Pectin extraction from apple pomace and lemon peel as residues of fruit juice industries, **12th International Congress on food industries, Iran.**
- **Zarei. M**. **2005**. HACCP implementing in Bisotun dairy industries and its benefits. **First Congress on Agricultural industries, Iran.**
- **Zarei. M**. **2006**. Effects of Modified Atmosphere Packaging (MAP) on Strawberry Quality- review, First Congress on Agricultural Products Packaging, **Iran**.
- **Zarei. M**. **2008**. Effect of extraction temperature on quality characteristics in extracted pectin of orange peel. Proceeding of the 18th International Congress on Food Science. **Mashhad, Iran**.
- Darvishi. Sh., **Zarei. M**., Beighendi, S. **2008**. Identification of yeasts in traditional sourdough using in OSKO traditional bread. Proceeding of the 18th International Congress on Food Science. **Mashad, Iran**.

●●●●●●