Ghadeer F. Mehyar, Professor Food Microbiology and Food Packaging Office 157, Department of Nutrition & Food Technology The University of Jordan Amman, Jordan Home: (9626) 5345455 Work: (9626) 5355000 Ext. 22421 Mobile: (9627) 77811821 g.mehyar@ju.edu.jo



Summary of Qualifications

- Professional research and teaching experience in Food Microbiology and Food Packaging.
- High creativity and persistency; proven ability to provide solutions and work under pressure.
- Outstanding personality, self-motivate and well organized.

Academic and Professional Interests

- Food Microbiology and Biotechnology.
- Active edible coatings and packaging.
- Food Products Development.

Education

2006	 PhD of Food Science Major: Food and Nutritional Sciences, Minor: Food Microbiology and Food Packaging. University of Manitoba, Winnipeg, MB, Canada. Thesis Title: Development of Antimicrobial Edible Coatings to Reduce Microbial Contamination of Broiler Carcasses Supervising professor: Dr. Jung (John) Han.
1993	Masters of Food Science Major: Food Science. The University of Jordan, Amman, Jordan. Thesis Title: The use of Sorbate and Benzoate Salts to Inhibit the Growth of Yeast in Labaneh (concentrated yogurt) Supervising professor: Dr. Mohamed I. Yamani and Dr. Ali K. Alsaed.
1991	Bachelor of Foods and Nutrition Major: Nutrition and Food Technology. The University of Jordan, Amman, Jordan.

Professional Experience

August 2017-Present	Professor Department of Nutrition and Food Technology, The University of Jordan, Amman, Jordan
Sep 2016-May 2017	Tempus Project Coordinator "Capacity Building of Personnel in Jordanian Olive Industry"
Sep 2015-Sep 2016	Dean Assistant for Development and Quality Affairs , Deanship of Academic Research, The University of Jordan
Sep 2014-Sep 2015	Dean Assistant for Community Affairs , Deanship of Academic Research, The University of Jordan
2013-August 2017	Associated Professor Department of Nutrition and Food Technology, The University of Jordan, Amman, Jordan
2007-2013	 Assistant Professor Department of Nutrition and Food Technology, The University of Jordan, Amman, Jordan Teaching undergraduate and gradate courses in subjects of Food Microbiology, Food Packaging and Food Hygiene. Conducting research in the fields of food packaging, microbial safety and quality of foods.
Sep. 2006-June 2007	 Post Doctoral Department of Food Science, University of Manitoba, Winnipeg. MB, Canada. Testing physical, mechanical and dissolution properties of pea starch gels.
2002 - 2004	 Teaching Assistant, Food Engineering Fundamentals University of Manitoba, Department of Food Science, Winnipeg, MB, Canada. Instructing undergraduate students on subjects including heat and mass balances, thermal conductivity, heat capacity and diffusivity.
Sep. 2001-May 2003	 Research Assistant University of Manitoba, Department of Food Science, Winnipeg. MB, Canada. Research for development of edible food packaging materials from pea and rice starch.

	 Testing the physical and mechanical properties of the produced films. Incorporating antimicrobials within packaging materials and determine their effect on the product microbial quality.
Summer 1998	 Workshop Supervisor Food Agricultural Organization of the United Nations. Instructing for processing of milk and milk products including product testing for small-scale producers conducted throughout Jordan.
Feb 1997 - Jan 2002	 Teaching Assistant/Laboratory Supervisor University of Jordan, Department of Nutrition and Food Technology, Amman, Jordan. Instructing undergraduate students for Food Microbiology, Meat Technology and Dairy Processing courses. Organizing laboratory experiments. Performing chemical and microbial testing of food and water samples for research purposes.
April 1992 - March 1	 995 Quality Engineer Danish Jordanian Dairy Company Implementing food quality and safety programs to insure product compliance to national and international standards.
Professional Membe	erching

1994 - 2008 Institute of Food Technologists, Chicago, IL.

1991 - Present Jordanian Agriculture Engineering Association, Amman, Jordan.

2010-2015 Jordan Association of Sensory Evaluation of Foods

Awards

- 1. First Place for Muscle Food Division Oral Competition, IFT, Orlando, FL, 2006.
- 2. University of Manitoba Graduate Travel Award, University of Manitoba, Winnipeg, MB, 2006.
- 3. University of Manitoba Graduate Travel Award, University of Manitoba, Winnipeg, MB, 2005.
- 4. Food Packaging Division Graduate Fellowship, IFT, Chicago, IL, 2005.
- 5. Certificate of Merit, Food Packaging Division, IFT, Chicago, IL, 2004.
- 6. Third Place for Food Packaging Poster Competition, IFT, Chicago, IL, 2003.
- 7. Manko Award, University of Jordan, Amman, Jordan, 1995.
- 8. Travel expenses from the United Nations, to attend the "Thermatic Workshop on Food, Agriculture, Fisheries and Biotechnology", Bari, Italy, July 2009.

- 9. Nine awards from the University of Jordan for publishing two manuscripts in journal listed among the ISI Web of Knowledge data base, 2010-Present.
- 10. Five awards from the University of Jordan for participation in examination committee for graduate students, 2010-Present.
- 11. Travel and accommodation expenses from Tempus joint project of European Nations as a visiting professor, to deliver seminars in Department of Biotechnology/ University of Verona, Verona, Italy, May 2016.

Serving in campus and off campus committees

1. Library committee, in campus.

- 2. Seminars, brushers and community service committee, in campus.
- 3. Training committee, in campus.
- 4. Scientific research committee, in campus.
- 5. Sports and fitness committee, in campus.
- 6. Scientific and graduation day committee, in campus.

7. Permanent committee for packaging materials, Jordan Standards and Metrology Organization, off campus.

8. Permanent committee for health and safety affairs of foods, Jordan Standards and Metrology Organization, off campus.

9. Technical committee for food supervising, Jordan Food and Drug Administration, off campus 10. Sensory evaluation team for table olives, Ministry of agriculture, off campus.

Contribution in workshops

1. Jordan Olive Products and Technology Exhibition and Forum, Al-Hussien Sport City, Amman, Jordan, 25th-26th April 2012.

2. Workshop on "How to Write a Successful Scientific Project", University of Jordan, Amman, 22nd Feb 2010

3. Thermatic Workshop on Food, Agriculture, Fisheries and Biotechnology, Istituto Agronomico Mediterraneo Di, Bari, Italy. 12th to 15th July 2009

4. The Use Different Starter Cultures and Enzymes and their Practical Applications in Food Industry – The University of Jordan, Amman, 1st Dec 2010.

5. A Scientific Day for the Dairy products, Agricultural Engineering Association, Amman, 3rd May 2008.

6. The Sixth Jordanian Agricultural Scientific Conference, The University of Jordan, 6th -7th Feb, 2008.

7. Food positing by microorganisms, TV interview, New Day program, 8th May 2013.

8. IPR and Technology Transfer Training, Amman, 17th-18th June 2013.

9. Microbial scales for foods, The University of Jordan, Amman, 1st July 2013.

10. International Conference on Advanced Materials, JUST, Irbid, 27th -28th April 2015

11. Sensory Evaluation of Olive oil and Table Olives, The University of Jordan, Amman 4th-8th Nov. 2015.

12. Visiting professor to Department of Biotechnology, University of Verona, Italy, 23-31st May 2016.

Courses Taught

- 1. Principles of Human Nutrition (0603100)
- 2. Principles of Food and Nutrient (0603101)
- 3. Principles of Food Science (0633220)
- 4. General Microbiology (0603301)
- 5. Food Microbiology (0603401)
- 6. Food Packaging (0603342)
- 7. Food Hygiene (0643453)
- 8. Advanced Food Packaging (0603712)
- 9. Toxicology in Food and Nutrition (0603942)
- 10. Training in Food Analysis and Quality Control (0643494)
- 11. Seminar in Nutrition and Food Processing (0603491)
- 12. Graduation Project (0663498)
- 13. Biotechnology in Foods and Nutrition (603933)

Supervising graduate students

- 1. Bushra Yakoob, MSc., Department of Nutrition and Food Technology, 2011-2013.
- 2. Mais Al-Hmood, MSc. Department of Nutrition and Food Technology, 2014-2016.
- 3. Wesal Al-Eaei, Msc. Department of Nutrition and Food Technology, 2014-2016.
- 4. Ghadeer Othman, PhD. Department of Nutrition and Food Technology, 2015-2017.
- 5. Dana Al-Omari, MSc. Department of Nutrition and Food Technology, 2016-2017.
- 6. Alia Amer, Msc, Department of Biology, Faculty of Science, 2015-2017
- 7. Maram Abu Irhayem, Department of Nutrition and Food Technology, 2017-2019.
- 8. Sajeda Amleh, Department of Nutrition and Food Technology, 2018-Present.
- 9. Aseel AlHabahbeh, Department of Nutrition and Food Technology, 2018-Present.
- 10. Hadeel AlKasasbeh, Department of Nutrition and Food Technology, 2018-Present.
- 11. Wasan Abu Fara, Department of Nutrition and Food Technology, 2018-Present.

Member of graduate student thesis examining committees

- 1. Rana Qasem, M.Sc., Department of Nutrition and Food Technology, JU, awarded 2011.
- 2. Malak Angor, Ph.D. Department of Nutrition and Food Technology, JU, awarded 2010.
- 3. Malak Al Awamleh, M. Sc., Department of Nutrition and Food Technology, JU, awarded 2010.
- 4. Firas Mustafa, M. Sc., Department of Nutrition and Food Technology, JU, awarded 2012
- 5. Shad Abu Odeh, M. Sc., Department of Nutrition and Food Technology, JU, awarded 2012
- 6. Amneh Tayeh, M. Sc., Department of Nutrition and Food Technology, JU, awarded 2012
- 7. Bayan AlTarifi, M. Sc., Department of Nutrition and Food Technology, JUST, awarded 2013
- 8. Khalid Almarazeeq, PhD, Department of Nutrition and Food Technology, JU, awarded 2014
- 9. Dema Nazal, MSc. Department of Nutrition and Food Technology, JUST, awarded 2016
- 10. Amani Sawalha, MSc. Department of Nutrition and Food Technology, JUST, awarded 2018

Supported Projects

1. European Commission and Deanship of Academic Research at the University of Jordan

Project title: Novelty Packaging Materials for Nuts and Intermediate Moisture Foods.

Value: 21000 JD.

 Deanship of Academic Research at the University of Jordan.
 Project title: Development of Antimicotic Edible Coating to Extend the Shelf-life of Tomato, Cucumber and Apples During Refrigerated Storage.

Value: 11900 JD.

 Deanship of Academic Research at the University of Jordan. Project title: The Efficacy of Coating in Shelf-life Elongation and Quality Preservation of Date at the 'Khalal' Stage of Maturity

Value: 21000 JD.

4. The Higher Council for Science and Technology, Amman, Jordan. Project title: Effect of Harvesting Time and Storage Temperature on the 'Khalal' Stage Duration in Fresh Dates

Value: 4000 JD.

5. Deanship of Academic Research at the University of Jordan. Project title: Effect of microencapsulation of cardomom's (*Elettaria cardamomum*) essential oil in biopolymers on its stability when packaged alone or within medium roasted Turkish coffee

Value: 11000 JD

 Deanship of Academic Research at the University of Jordan. Project title: Sequential disruption of chickpea and lentil flour proteins and their use in macaroni production.

Value: 13700 JD

7. Deanship of Academic Research at the University of Jordan. Project title: Restructuring processes related to duties of Deanship of Academic Research to increase their validity and efficiency.

Value 25000 JD

8. Deanship of Academic Research at the University of Jordan. Project title: Effect of partial replacement of salt in brine solution of Halloumi cheese with chitosan coatings coatins lysozyme or natamycine on microbila quality of the cheese.

Value: 10000 JD

 Deanship of Academic Research at the University of Jordan Project title: Comparison between opened sun drying and closed drying systems on quality of date fruits variety Majool.

Value: 12585 JD

9. عمادة البحث العلمي في الجامعة الأردنية عنوان البحث: مقارنة ما بين التجفيف الشمسي المقتوح وأنظمة التجفيف الشمسية المغلقة على نوعية ثمار نخيل البلح صنف مجمول.

القيمة 12585 د.أ

 Deanship of Academic Research at the University of Jordan Project title: Effect of adding β-amylase enzyme in corn and soya based feeds on productivity of chicken eggs and broilers.

Value: 45000

10. عمادة البحث العلمي في الجامعة الأردنية أثر اضافة انزيم البيتا مانيز على العلائق المبنية على الذرة والصويا على الأداء الانتاجي لدجاج البيض ودجاج اللحم.

القيمة 45000 د.أ.

11. The Education, Audiovisual and Culture Executive Agency (EACEA), EU Project title "Capacity Building of Personnel in Jordanian Olive Industry" This project includes ten partners; six Jordanian and four European

Value: 799 000 EUR

Publications

a. Refereed Journals

1. Mihyar (Mehyar), G. F., Yamani, M. I., and Al- Sa'ed, A. K. (1997). Resistance of yeast flora of labaneh to potassium sorbate and sodium benzoate. Journal of Dairy Science. 80: 2304 - 2309.

2. **Mihyar** (**Mehyar**), G. F., Yousif, A. K., and Yamani, M. I. (**1999**). Determination of benzoic and sorbic acids in labaneh by high-performance liquid chromatography. Journal of Food Composition and Analysis. 12: 53-61.

3. **Mehyar, G. F.**, and Han, J. H. (**2004**). Physical and mechanical properties of high-amylose rice and pea starch films as affected by relative humidity and plasticizer. Journal of Food Science. 69: E449-E454.

4. **Mehyar, G. F.**, Delaimy, K. S., and Ibrahim, S. A. (**2005**). Citric acid production by *Aspergillus niger* using date base medium fortified with whey and additives. Food Biotechnology. 19: 137-144.

5. **Mehyar, G. F.**, Blank, G., Han, J. H., Hydamaka, A., and Holley, R. A. (**2005**). Effectiveness of trisodium phosphate, lactic acid and commercial antimicrobials against pathogenic bacteria on chicken skin. Food Protection Trends. 25: 351-362.

6. **Mehyar, G. F.**, Blank, G., Han, J. H., Hydamaka, A. and Holley, R. A. (**2007**). Suitability of antimicrobial pea starch and alginate coatings on chicken. Poultry Science. 86: 386-393.

7. Mehyar, G. F., Liu, Z., and Han, J. H. (2008). Dynamics of antimicrobial hydrogels in physiological saline. Carbohydrate polymers. 74:92-98.

8. **Mehyar, G. F.**, and Han, J. H. (**2011**). Active Packaging for Fresh-Cut Fruits and Vegetables. *In* Brody, A., L, Zhuang, H and Han, J. H, editors. Modified Atmosphere Packaging for Fresh cut Fruits and Vegetables. First Edition, Wiley-Blackwell, West Sussex, UK. Pp. 267-282.

9. Yamani, M. I. and **Mehyar G. F. (2011)**. Effect of chemical preservatives on the shelf life of hummus during different storage temperatures. Jordan Journal of Agricultural Sciences. 7:19-31.

10. **Mehyar, G. F.**, Al-Qadiri, H. M., Abu-Blan, H. A. and Swanson, B. G. (**2011**). Antifungal effectiveness of potassium sorbate incorporated in edible coatings against spoilage molds of apples, cucumbers, and tomatoes during refrigerated storage. Journal of Food Science. 76: M210-M217.

11. **Mehyar G. F.**, Al-Ismail, K, Han, J. H. and Chee, G. W. (**2012**). Characterization of edible coatings consisting of pea starch, whey protein isolate and carnauba wax and their effect on oil rancidity and sensory properties of walnuts and pine nuts. Journal of Food Science. 77(2): E52-E59.

12. **Mehyar G. F**. Hamzah Al-Qadiri and Barry Swanson. (**2012**). Edible coatings and retention of potassium sorbate on apples, tomatoes and cucumbers to improve antifungal activity during refrigerated storage. Journal of Food Processing and Preservation. 1:1-8.

13 Alsaed, A. K., **Mehyar, G. F.** and Arar, A. (**2013**). Effect of harvesting time and storage temperature on the duration of Balah stage of 'Barhi' dates. Italian Journal of Food Science. 25(3):345-353.

14. Nihad G. Alsmairate, Najib M. Al Assi, Ayed Al Abdallat and **Ghadeer F. Mehyar**. (2013). Enhancement of edibility of "Barhi" and "Madjool" date palm cultivars at khalal mature stage. International Journal of Botany. 9(3): 123-132.

15. **Mehyar G. F**, Najib M. El Assi, Nihad G. Alsmairat and Richard A. Holley. (**2014**). Effect of edible coatings on fruit maturity and fungal growth on Berhi dates. International Journal of Food Science and Technology. 49(11):2409-2417.

16. Mehyar G. F., Khalid M. Al-Ismail, Hana" a M. Al-Ghizzawi, Richard A. Holley. (2014). Stability of cardamom (Elettaria cardamomum) essential oil in microcapsules made of whey protein isolate, guar gum and carrageenan. Journal of Food Science. 79(10): C1939-C1949.

17. Khalid M. Al-Ismail. Ghadeer F. Mehyar, Hatim S. Al-Katib, M Al-Dabbas. (2015). Effect of microencapsulation of cardamom's essential oil in gum Arabic and whey protein isolate using spray drying on its stability during storage. Quality Assurance and Safety of Crops and Foods. 7 (5): 613-620.

18. Alsaed, A. K. and Mehyar, G. F. (2014). Effect of harvesting time and storage duration on properties of palm fruits of Barhi variety at the at the khalal stage of maturity (in Arabic). Jordan Journal of Agricultural Sciences. 11(4): 1147-1159.

19. Mohammed Saleh, Ghadeer F. Mehyar, Ayed Amr, George Ondier. (2015). Sequential acid-, alkaline-, and enzymatic modifications of chickpea and lentil flours impacted batter Physical properties. Cereal Chemistry. 92 (2): 161-17.

20. Mehyar, G. F. and Al Bawab A. (2015). Resistance to moist conditions of whey protein isolate and pea starch biodegradable films and low density polyethylene nondegradable films: a comparative study. IOP Conference Series: Materials Science and Engineering 92(1):1-7.

21. Mohammed Saleh, AyedAmr, Ghadeer F. Mehyar and George Ondier (2016). Predicting farinograph parameters by rapid visco-analyzer pasting profile using Partial Least Square (PLS) regression. Quality Assurance and Safety of Crops & Foods. 8 (1): 41-49.

22. Amin N. Olaimat, Anas A. Al-Nabulsi, Tareq M. Osaili, Murad Al-Holy, Mutamed M. Ayyash, Mahmoud Abu Ghoush, Ghadeer F. Mehyar, Richard A. Holley. (2017). Survival and Inhibition of Staphylococcus aureus in Commercial and Hydrated Tahini Using Acetic and Citric acids. Food Control. Food Control. 77 (17): 179-186.

23. Mousa Numan Ahmad, Ghadeer Fawzi Mehyar, and Ghadeer A Othman. (2017). Diet and Cardiometabolic Risks: A Connection Through Gut Microbiota. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 8(2): 2397-2409.

24. Mehyar, Ghadeer F., Al-Nabulsi A., Saleh, Muhammed, Olimate, Amin, Holley, Rick. (2018). Effect of chitosan coating containing lysozyme or natamycin on shelf-life, microbial quality and sensory properties of Halloumi cheese brined in normal and reduced salt solutions. Journal of Food Processing and Preservation. 2018;42:e13324.

http://onlinelibrary.wiley.com/doi/10.1111/jfpp.13324/abstract

25. Mehyar, G. F. and Richard Holley (2018). Active Packaging and non-Thermal Processing. In Packaging for Nonthermal Processing of Food, 2nd Edition. Wiley-Blackwell, West Sussex, UK. P 15-41.

26. Nihad Alsmairat1, Tamara Al-Oudah, Najib El-Assi1, Ghadeer Mehyar, Issa Gammoh1, Yahia A Othman1, Salah-Eddin Araj, Tawfiq M Al-Antary.(2019) Effect of drying process on physical and chemical properties of 'Medjool' date palm fruit. Fresenius Environmental Bulletin. 28(2A): 1552-1559.

27. Anas Al-Nabulsi, Tareq Osaili, Amani Sawalha, Amin N. Olaimat, Burhan Aldeen Al-Biss, **Ghadeer Mehyar**, Richard Holley. (**2020**) Antimicrobial activity of chitosan coating containing ZnO nanoparticles against *E. Coli* O157:H7 on the surface of white brined cheese. In Preparation.

b. Refereed Conference Proceedings

1. **Mehyar, G. F.**, and Han, J. H. (2003). Physical and mechanical properties of edible films made from high-amylose rice and pea starches. Poster, IFT meeting. Chicago, IL.

2. **Mehyar, G. F.**, Holley, R. A., Blank, G., and Han, J. H. (**2004**). The improved efficiency of the commercial antimicrobials on chicken carcasses by sequential treatments. Oral presentation, IFT meeting. Las Vegas, NV.

3. **Mehyar, G. F.**, Ibrahim, S. A., and Al-Delaimy, K. S. (**2005**). Citric acid production by *Aspergillus niger* using date base medium fortified with whey, methanol and tricalcium phosphate. Poster, IFT meeting. New Orleans, LA.

4. **Mehyar, G. F.**, Ibrahim, S. A., and Yamani, M. I. (2005). Use of chemical preservatives to extend the shelf life of hummus. Poster. IFT meeting. New Orleans, LA.

5. **Mehyar, G. F.**, Holley, R. A., Blank, G., Han, J. H., and Hydamaka, A. W. (**2005**). Antimicrobial edible packaging incorporated with trisodium phosphate and acidified sodium chlorite (Sanova) to reduce pathogens on chicken carcasses. Oral presentation, IFT meeting. New Orleans, LA.

6. **Mehyar, G. F.**, Blank, G., Han, J. H., Hydamaka, A. and Holley, R. A. (**2006**). Physical characterization of antimicrobial pea starch and calcium alginate coatings to reduce bacterial pathogens on chicken skin. Oral presentation, IFT meeting, Orlando, FL.

7. Alsaed, A. K., **Mehyar, G. F.** and Arar A. (**2011**). Effect of harvesting date and storage temperature on the duration of Khalal stage of fresh Barhi dates. Oral presentation, The 7th International Postharvest Symposium, Kuala Lumpur, Malaysia.

8. G. F. Mehyar (2015). Potential biodegradable materials to replace LDPE in moist foods

wrapping. Poster. International Conference on Advanced Materials. 27-29 April, JUST, Irbid, Jordan.

c. Theses

1. Mihyar (Mehyar), G. F. (1996). The use of sorbate and benzoate salts to inhibit the growth of yeast in labaneh. Masters thesis, University of Jordan.

2. **Mehyar, G. F. (2006)**. Development of antimicrobial edible coatings to reduce microbial contamination of broiler carcasses. Ph. D. thesis, University of Manitoba, MB.

d. Technical Reports

Mehyar, G. F. (1998). Workshops on the application of good milking and good dairy manufacturing practices in ten different provinces in Jordan conducted in March through September of 1998. Hygienic Milk Handling TCP/JOR/6611. Report to FAO. Rome, Italy.

e. Manuscripts Revision

Participated as a reviewer in the following peer reviewed journals:

- Journal of Dairy Science, American Dairy Science Association, USA
- Journal of Food Science, IFT, USA
- Food Biotechnology, Taylor and Francis, USA
- Turkish Journal of Biology, Scientific and Technological Research Council, Turkey
- African Journal of Biotechnology, Academic Journals, Nigeria
- Jordan Journal of Agricultural Sciences, The University of Jordan, Jordan
- International Journal of Food Science and Technology, Wiley, UK
- Journal of Food Processing and preservation, UK
- Journal of Microencapsulation, Taylor and Francis, UK
- Journal of Applied Microbiology, Wiley, UK
- Letters in Applied Microbiology, Wiley, UK
- Oleo Science, Japan Oil Chemists' Society, Japan

Professional website link: <u>http://eacademic.ju.edu.jo/g.mehyar/default.aspx</u>

https://scholar.google.com/citations?user=weYImvgAAAAJ&hl=en