

# Muhammad H. Al-u'datt

Associate Professor of Food Chemistry



## Personal

Date of Birth: 18th Nov., 1977  
Nationality: Jordanian/Canadian  
Marital Status: Married  
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## Education

2003-2007 **Doctor of Philosophy** (Cumulative GPA: 4) Department of Food Science and Agricultural Chemistry, McGill University, Quebec, Canada.  
Dissertation: Phenolic compounds in oil-bearing plants and their interactions with protein isolates.  
2001-2003 **Master of Science** (Cumulative GPA: 4) Department of Food Science and Agricultural Chemistry, McGill University, Quebec, Canada.  
Dissertation: Isolation and characterization of soybean and whey protein co-precipitates.  
1995-1999 **Bachelor of Nutrition and Food Technology** (Cumulative Average: 85.3%, Excellent) Department of Nutrition and Food Technology, Faculty of Agriculture, Jordan University of Science and Technology, Jordan.  
First in class, Faculty of Agriculture.

## Experience

**2015-2016 Visiting Professor**, Department of Food Science and Agricultural Chemistry, McGill University, Quebec, Canada.  
**2014-2015 Visiting Professor**, Human Nutrition, Umm Al-Qura University, Makkah 21955, Saudi Arabia  
**2012-2014 Associate Professor**, Department of Nutrition and Food Technology, Jordan University of Science and Technology, Jordan  
**2011-2013 Head of Department**, Department of Nutrition and Food Technology, Jordan University of Science and Technology, Jordan.  
**2006-2012 Assistant Professor**, Department of Nutrition and Food Technology, Jordan University of Science and Technology, Jordan  
**2002, 2003, 2005 Graduate Teaching Assistant/Demonstrator**, Department of Food Science and Agricultural Chemistry, McGill University, Quebec, Canada  
**2003-2006 Chemical Analyst (Casual)** Department of Food Science and Agricultural Chemistry, McGill University, Quebec, Canada  
**2001-2006 Graduate Research Assistant**, Department of Food Science and Agricultural Chemistry, McGill University, Quebec, Canada

**1999-2001**      **Research Assistant** (Food Chemistry Laboratory of Prof. Khalil I. Ereifej, Department of Nutrition and Food Technology, Faculty of Agriculture, Jordan University of Science and Technology, Jordan.

## **Research Interests**

I have professional expertise in the area of

1. Food chemistry
2. Developing nutritious food products
3. Food engineering and food processing
4. Food chemistry
5. Rheological properties
6. Food proteins
7. Phenolic compounds and lipids as pharmaceutical, nutraceutical
8. Food chemistry (protein-protein interactions, lipid-phenolic interactions, and protein-phenolic interactions).
9. Food biotechnology (synthesis of new compounds)
10. Food enzymology (characterization and purification of enzymes).
11. Clinical nutrition
12. Functional food.
13. Probiotics
14. Prebiotics

My primary interest is in the area of food chemistry and their application in human nutrition and clinical nutrition (in vitro study including allergic, diabetics, hypertension and cancer). I'm an inventor and primary researcher for patent for food protein products and the processes for preparation of the proteins for use as food ingredients.

## **Research Grants**

1. Scientific Research Support Fund (Ministry of Higher Education Jordan): "Biological properties of black cumin *Nigella sativa* L 56,000JD (2007-2012)."
2. Jordan University of Science and Technology: "Protein phenolic interactions in black cumin (*Nigella sativa* L.). 2400JD (2007-2009)."
3. Jordan University of Science and Technology: "Effect of supplementation of wheat flours with milk and soybean proteins on chemical, functional and sensory properties. 7000JD (2009-2011)."
4. Jordan University of Science and Technology: "Effect of fortification of barely proteins on chemical, functional and sensory properties of arabic bread. 5200JD (2008-2010)."
5. Jordan University of Science and Technology: "Effect of egg yolk replacement using different plant protein on chemical, Physicochemical, nutritional and therapeutic properties of mayonnaise. 9100JD (2011-2013)."
6. Jordan University of Science and Technology: "Anti-oxidant, anti-diabetic and anti-hypertensive effects of extracted phenolics from medicinal plants. 6000JD (2010-2011)."
7. Jordan University of Science and Technology: "Effects of extracted phenolics and peptides from royal jelly on anti-oxidant, anti-diabetic, anti-carcinogenic and anti-hypertensive properties. 9000JD (2011-2013)."
8. Jordan University of Science and Technology: "Nutritional management system for Jordanian food habits. 1000JD (2011-2013)."

9. Yarmuk University: "Production of photochemical compounds from *in vitro* growing *Rumex cyprius* L. and *Artemisia herba alba* L. in process. 5000JD".
10. Jordan University of Science and Technology, Characterization of Camel Milk. 5000JD (2007-2009)."
11. Jordan University of Science and Technology: "Effect of protein-phenolic interaction on allergenicity of wheat proteins in process 12000JD."
12. The Long-Term Comprehensive National Plan for Science, Technology and Innovation Saudi Arabia: "Improving the nutritional and functional properties of liquid and semi-liquid foods in Saudi Arabia with food protein-mediated nano-structures. In process (2,000,000 riyal). Under review.
13. The Long-Term Comprehensive National Plan for Science, Technology and Innovation Saudi Arabia: "Computerized Nutritional and Health Management System for Gulf Area " In process (2,000,000 riyal). Under review.

## Teaching

### **Undergraduate**

Principles of Food Science  
 Food Technology  
 Food Quality Control  
 Food Analysis Chemistry  
 Seminar  
 Special Topics

### **Graduate Courses**

Advanced Food Chemistry  
 Food Lipids and Oil  
 Food Proteins  
 Master Thesis  
 Seminar

### **Graduate (Master) Student Supervision**

1. Characterization of camel's milk in Jordan (2009). Hana Alkhaldi.
2. Effect of fortification of barely proteins on chemical, functional and sensory properties of Arabic bread. (2010). Nather Masadeh.
3. Anti-oxidant, anti-diabetic and anti-hypertensive effects of extracted phenolics from medicinal plants (2011). Merfat Rawashedah.
4. Effect of egg yolk replacement using different plant proteins on chemical, physicochemical, nutritional and therapeutic properties of mayonnaise (2011). Deia Tawalbeh.
5. Effects of extracted phenolics and peptides from royal jelly on anti-oxidant, anti-diabetic, anti-carcinogenic and anti-hypertensive properties (2011). Wafa Ayyadi.
6. Characterization and biological properties of jameed manufactured by sun and freeze – drying (2012). Rami Thenabat

7. Production of photochemical compounds from *in vitro* growing *Rumex cyprius* L. and *Artemisia herba alba* L. (2012). Haifa' Muhammed Al Zghoul.
8. The effect of egg yolk replacement on the physicochemical and sensory properties of low fat mayonnaise with using different types of dietary fiber (2013) Firas Abou Rashaid.
9. Effect of extracted phenolic compounds from some fruits and vegetables in Jordan on the total content of phenols, antioxidant activity, anti-diabetic and anti-hypertensive properties. (2013) Kawther Alghozlan.
10. Effect of natural lipid phenolic interaction on biological properties of virgin olive oil (2013) Ola Alnaiemi.
11. Evaluating the effect of *Foeniculum vulgare* (fennel) extract on enzymes activity related to diabetes and hypertension (2014) Wafa Ali.
12. Nutritional computer management system for Jordanian food (2014). Souded Aloubide.
13. Effect of protein-phenolic interaction on allergenicity of wheat proteins (2014). Neven Mustafa.
14. Develop a method for detection of milk powder in dairy products (2014). Hala Hindi.
15. Ali Alqaisi Proposal under preparation.
16. Faten Aboueni Proposal under preparation.
17. Ranad Alfakouri Proposal under preparation.
18. Majdoulin Alshanik Proposal under preparation.
19. Firas Bani Salmeh Proposal under preparation.
20. Mohammad Alrousan Proposal under preparation.
21. Sura Abou Nasser Proposal under preparation.

## **Workshops and Leadership Participation**

- Training courses on HACCP and ISO 22000 at Jordan University of Science and Technology.
- ISO 22000 workshop (held at the Consultative Center, JUST).
- HACCP workshop (held at the Consultative Center, JUST).
- Food Safety workshop (held at the Consultative Center, JUST).
- Supervising for Jordanian Food Drug Administration.

## **Editorial Responsibilities**

- Editor for Journal Computational Water, Energy, and Environmental Engineering.
- Editorial Board for Austin Food Sciences Journal.

## **Refereeing Activity**

- International Journal of Food Properties.
- Journal of Natural Product Research.
- Jordan Journal of Agricultural Sciences.
- Journal of Food Science.
- Food Chemistry.
- LWT-Food Science and Technology.
- Food Hydrocolloids.
- The Journal of Food Processing and Preservation.
- Food Research International.

- CyTA - Journal of Food.
- JAOCS
- Journal of Food Quality.
- Journal of Agricultural and Food Chemistry.
- Medicinal Research Chemistry.

## Food Industry Consultation

1. Ministry of Industry and Commerce, Department of Specifications and Standards. Amman, Jordan.
2. Developing and solving problems related food industry (F-program).
3. USDEC Seminar on U.S. Whey & Milk Powder-Sunday, June 26, 2011.
4. Food Industry Technical Expert/Professional Services/Consultant:Professional services/Consultant in Food Quality/Food Safety.
5. Trainer for Hazard Analysis Critical Control Point (HACCP) (2005-till now)
6. Trainer for Food Defense.
7. Food Safety Technical Expert.

## Publications

### Published Peer Reviewed Journal Articles

1. Aqeel, A. M.; Hameed, K. M.; **Alu'datt, M. H.** (2007). Effect of olive mill by-products on mineral status, growth and productivity of faba bean, *Journal of Agronomy*, 6 (3), 403-408.
2. Al-Tawaha, A.; McNeil, D.; Yadav, S.; Turk, M.; Ajlouni, M.; Abu-Darwish, M.; Al-Ghzawi, **Al-udatt, M.**; Aladaileh, S. (2010). Integrated legume crops production and management technology. *Climate change and management of cool season grain 325 legume crops*, Springer Science and Business Media. 325-349.
3. Al-Mahasneh, M.A.; Rababah, T.M.; **Al-u'datt, M.H.**; Yang, W. (2010). Moisture adsorption thermodynamics of fractionated sesame hulls (*Sesamum indicum* l.). *Journal of Food Process Engineering*, 33, 802–819.
4. Rababah, T.; Ereifej, K.; Al-Mahasneh, M.; Alhamad, M.; Alrababah, M.; **Alu'datt, M.** (2008). The physicochemical composition of acorns for two Mediterranean *Quercus* Species. *Jordan Journal for Agricultural Science*, 4(2), 131-137.
5. **Alu'datt, M.**; Alli, I.; Ereifej, K.; Alhamad, M.; Alsaad, A.; Rababeh, T. (2011). Optimization and characterization of various extraction conditions of phenolic compounds and antioxidant activity in olive seeds. *Journal of Natural Product Research*, 25 (9), 876–889.
6. **Alu'datt, M.**; Alli, I.; Ereifej, K.; Alhamad, M.; Al-Tawaha, A.; Rababeh, T. (2010). Optimisation, characterisation and quantification of phenolic compounds in olive cake. *Food Chemistry*, 123 (1), 117-122.
7. **Alu'datt, M.**; Ereifej, K.; Alothman, A.; Almajwal, A.; Alkhalidy, H.; Al-Tawaha, A. and Alli, I. (2010). Variations of some physical properties, chemical, minerals and vitamins

composition of camel milk from eight locations in Jordan. *Journal of Food, Agriculture and Environment*, 8(3&4), 16-20.

8. Ereifej, K.; **Alu'datt, M.**; AlKhalidy, H.; Rababah, T. (2011). Comparison and characterization of fat and protein composition for camel's milk from eight Jordanian locations. *Food Chemistry*, 127 (1), 282-289.
9. **Alu'datt, M.**; Ereifej, K.; Abou-zaiton, A.; Al-Rababah, M.; Almajwal, A., Rababah, T; Yang, W. (2012). Anti-oxidant, anti-diabetic and anti-hypertensive effects of extracted phenolics and hydrolyzed peptides from barley protein fractions. *International Journal of Food Properties*, 15(4), 781-795.
10. **Alu'datt, M.**; Rababah, T.; Ereifej, K.; Alli, I.; Masadeh, N.; Alhamad, M. (2012). Effects of barley flour and barley protein isolate on chemical, functional, nutritional and therapeutic properties of Pita bread. *Journal of Food Hydrocolloids*, 26, 135-143.
11. Ereifej, K.; Esoh, R.; Rababah, T.; Almajwal, A.; **Alu'datt, M.H.** (2012). Mineral, proximate composition and their correlations of medicinal plants from Jordan, *Journal of Medicinal Plants Research*, 6(47), 5757-5762.
12. Rababah, T.; Ereifej, K.; Alhamad, M.; Al-Qudah, K.; Rousan, L.; Al-Mahasneh, M.; **Al-u'datt M.**; Yang, W. (2011). Effect of green tea and grape seed and TBHQ on physicochemical properties of baladi goat meats. *International Journal of Food Properties*, 14, 1208-1216.
13. Rababah, T.; Yu` cel, S.; Ereifej, K.; Alhamad, M.; Al-Mahasneh, M.; Yang, W.; **Al-u'datt, M.**; Ismael, K. (2011). Effect of grape seed extracts on the physicochemical, and sensory properties of corn chips during storage. *Journal of the American Oil Chemists' Society*, 88, 631-637.
14. Rababah, T.; **Al-u'datt, M.**; Al-Mahasneh, M.; Feng, H.; Alothman, A.; Almajwal, A.; Yang, W.; Kilani, I.; Alhamad, M.; Ereifej, K.; Abu- Darwish, M. (2011). Effect of storage on the physicochemical properties, total phenolic, anthocyanin, and antioxidant capacity of strawberry jam. *Journal of Food, Agriculture and Environment*, 9 (2), 101-105.
15. Rababah, T.; Ereifej, K.; Esoh, R; **Al-u'datt, M.**; Alrababah, M.; Yang, W. (2011). Antioxidant activities, total phenolics, and HPLC analysis of the phenolic compounds of extracts from common Mediterranean plants. *Natural Product Research*, 25(6), 596-605.
16. Rababah, T.; Al-Mahasneh, M.; Kilani, I.; Yang, W.; Alhamad, M.; Ereifej, K.; **Al-u'datt, M.** (2011). Effect of jam processing and storage on total phenolics, antioxidant activity, and anthocyanins of different fruits. *Journal of the Science and Food Agriculture*, 91, 1096-1102.
17. Rababah, T.M.; Al-Mahasneh, M.A.; Yang, W.; Esoh, R.; Alhamad, M.N.; **Al-u'datt, M.H.** (2012). Optimizing the best concentration of additive flavors to corn chips by evaluating the physicochemical and sensory properties. *Journal of Food Processing and Preservation*, 36 (3), 225-231.
18. Abu-Darwish, M. S.; **Alu'datt, M. H.**; Al-Tawaha, A.; Ereifej, K. I., Almajwal, A.; Odat, N.; Al Khateeb, W. (2011). Seasonal variation in essential oil yield and composition from *Thymus vulgaris* L. during different growth stages in the south of Jordan. *Natural Product Research*, 26(14),1310-1317

19. Odat, N.; Al Khateeb, W.; Muhaidat, R.; **Alu'datt M.**; Irshiad, L. (2011). Effect of exotic *Acacia saligna* tree on plant biodiversity of northern Jordan. *International Journal of Agriculture and Biology*, 13(6), 823–826
20. **Alu'datt, M.**; Rababah, T.; Ereifej, K.; Brewer, S.; Alli, I. (2013). Phenolic-protein interactions in oilseed protein isolates. *Food Research International*, 52 (1), 178-184.
21. **Alu'datt, M.**; Ereifej, K.; Rababah, T.; Alli, I. (2013). Distribution, antioxidant and characterisation of phenolic compounds in soybeans, flaxseed and olives. *Food Chemistry*, 139 (1-4), 93-99.
22. **Alu'datt, M.**; Alli, I.; Nagadi, M. (2012). Preparation, characterization and properties of whey-soy proteins co-precipitates. *Food Chemistry*. 134, 1, 294-300.
23. **Alu'datt, M.**; Rababah, T.; Alli, I. (2014). Effect of phenolic compound removal on rheological, thermal and physico-chemical properties of soybean and flaxseed proteins. *Food Chemistry*. 46, 608-613.
24. **Alu'datt, M. H.**; Al-Rabadi, G. J.; Alli, I.; Ereifej, K.; Rababah, T.; Alhamad, M. N.; Torley, P. (2013). Protein co-precipitates: a review of their preparation and functional properties. *Food and Bioproducts Processing*, 91 (4), 327–335.
25. Rababah, T. M.; Feng, H. F.; Yang, W. Y.; Al-Mahasneh, M.; Ereifej, K.; **Al-u'datt, M. H.** (2012). Effect of grape seed extracts on physicochemical and sensory properties of goat meat cooked by conventional electric or microwave ovens. *Food Scienc and Technology. Research*, 18 (3), 325 – 332.
26. Rababah, T. M.; **Al-u'datt, M.**; Al-Mahasneh, M.; Yang, W.; Feng, H. (2012). Evaluation the nutraceutical, physiochemical and sensory properties of raisin jam. *Journal of Food Science*, 77(6):C609-613.
27. Al Khateeb, W.; Hussein, E.; Qouta, L.; **Alu'datt, M.**; Al-Shara, B.; Abu-zaiton, A. (2012). In vitro propagation and characterization of phenolic content along with antioxidant and antimicrobial activities of *Cichorium pumilum* Jacq. *Plant Cell, Tissue and Organ Culture*, 110, 103-110.
28. Rababah, T. M.; Brewer, S.; Yang, W.; Al-mahasneh, M.; **Al-u'datt, M.**; Rababa, S.; Ereifej, K. (2012). Physicochemical properties of fortified corn chips with broad bean flour, chickpea flour, or isolated soy protein. *Journal of Food Quality*, 35 (3), 200-206.
29. Alhamad, M. N.; Rababah, T. M.; **Al-u'datt, M.**; Ereifej, K. Esoh, R.; Feng, H.; Yang, W. (2012). The physicochemical properties, total phenolic, antioxidant activities, and phenolic profile of fermented olive cake. *Arabian Journal of Chemistry*, Accepted paper. <http://dx.doi.org/10.1016/j.arabjc.2012.07.002>.
30. Rababah, T. M.; **Al-u'datt, M.**; Ereifej, K.; Almajwal, A.; Al-Mahasneh, M; Brewer, S.; Alsheyab, F.; Yang, W. (2013). Chemical, functional, and sensory properties of carob juice. *Journal of Food Quality*, 36 (4), 238–244.
31. Rababah, T.; Al-Omoush, M.; Brewer, S.; Alhamad, M.; Yang, W.; Alrababah, M.; Al-Ghzawi, A.; **Al- u'datt, M.**; Ereifej, K.; Alsheyab, F.; Esoh, R.; Almajwal, A. (2014). Total phenol, antioxidant activity, flavonoids, anthocyanins and color of honey as affected by floral origin found in the arid and semiarid mediterranean areas. *Journal of Food Processing and Preservation*, 38 (3), 1119–1128.
32. **Alu'datt, M. H.**; Rababah, T.; Al-Rabadi, G. J.; Ereifej, K.; Gammoh, S.; Masadeh, N.; Torley, P. (2014). Effects of barley flour and barley protein isolate addition on rheological

- and sensory properties of pita bread. *Journal of Food Quality*, 37 (5), 329–338.
33. Rababah, T. M.; Al-Mahasneh, M.; **Al-u'datt, M. H.**; Ereifej, K.; Kilani, I.; Almajwal, A.; Brewer, S., Wade Yang; W. Awaisheh, S. (2014). Effect of jam processing on physicochemical properties of different fruits during storage. *Journal of Food, Agriculture and Environment*, 12 (2), 277-280.
  34. **Alu'datt, M. H.**; Rababah, T.; Al-Rabadi, G. J.; Thenabat, R.; Ereifej, K.; Alhamad, M.; Al-Ismael, K.; Brewer, S. (2014). Effects of sun and freeze-drying techniques on molecular, fatty acids and therapeutic properties of fermented goat milk product. *Journal of Food Science and Technology*, 52(9), 5989–5995.
  35. **Alu'datt, M. H.**; Rababah, T.; Ereifej, K.; Gammoh, S.; Alhamad, M. N., Mhaidat, N.; Kubow, S.; Johargy, A.; Alnaiemi, O. J. (2014). Investigation of natural lipid-phenolic interactions on biological properties of virgin olive oil. *Journal of Agricultural and Food Chemistry*. 62 (49), 11967-11975.
  36. Bdour, M. A.; Al-Rabadi, G. J.; Al-Ameiri, N.; Mahadeen, A.; **Aludatt, M.** (2014). Microscopy analysis of extruded and pelleted animal feed: Quality control in feed industry. *Jordan Journal of Biological Science*, 7 (3), 227-231.
  37. Al-Omari, H. Y.; Al-Rawashdeh, M. S.; Al-Rabadi, G. J.; **Alu'datt, M. H.**; Ereifej, K. I. (2014). Effect of removal of large particles from milled barley on growth performance in broiler during growing stage. *Bulletin of the Faculty of Science of Cairo University*, 65 (2), 133-140.
  38. Rababah, T. M.; **Al-u'datt, M.**, Al-Mahasneh, M.; Yang, W.; Feng, H.; Ereifej, K.; Kilani, I.; Abu Ishmais, M. (2014). Effect of jam processing and storage on phytochemicals and physiochemical properties of cherry at different temperatures, *Journal of Food Processing and Preservation*, 38 (1), 247–254.
  39. Al-Rabadi, G. J.; Al-Rawashdeh, M. S.; Al-Omari, H. Y.; Al-khamaiseh, S. K.; **Alu'datt, M. H.**; Ereifej, K. I. (2014). Effects of corn particle size on growth performance and on the gastrointestinal morphology of broiler chickens during growing stage. *Jordan Journal of Agriculture Science*. 11 (2), 451-460.
  40. Tawalbeh, Y.; Ajo, R.; **Al-u'datt, M. H.**; Gammoh, S.; Maghaydah, S.; Al-Qudah, Y.; Al-Sunnaq, A.; Al-Natour, F. (2014). Investigation of the antimicrobial preservatives in the dairy product (Labneh). *Food Science and Quality Management*, **31**, 117-121.
  41. Obaidat, M. M.; **Au'datt, M. H.**; Bani Salman, A. E.; Obaidat, H. M.; Al-Zyoud, A.; Al-Saleh, O. K.; Abu al'anaz, B. (2015). Inactivation of nondesiccated and desiccated *Cronobacter Sakazakii* and *Salmonella spp.* at low and high inocula levels in reconstituted infant milk formula by vanillin. *Food Control*, **50**, 850–857.
  42. **Alu'datt, M. H.**; Rababah, T.; Obaidat, M. M.; Ereifej, K.; Alhamad, M. N., Mhaidat, N.; Andrade, J. E.; Johargy, A.; Ayadi, W. (2015). Probiotics in milk as functional food: characterization and nutraceutical properties of extracted phenolics and peptides from fermented skimmed milk inoculated with royal jelly. *Journal of Food Safety*, 35 (4), 509–522.
  43. El-Qudah, J. M.; Almajwal A. M.; Al-Momani, M. A.; Alothman, A. M.; **Al-udatt, M. H.**; Al-Qudah, M. (2015). Evaluation of food consumption in a sample of pregnant women from Jordan. *Journal of Agricultural Sciences*, **11** (1), 179-187.



44. Rababah, T. M.; **Al-u'datt, M.**; Alhamad, M.; Al-Mahasneh, M.; Ereifej, K.; Andrade, J.; Altarifi, B.; Almajwal, A.; Yang, W. (2015). Effects of drying process on total phenolics, antioxidant activity and flavonoid contents of common Mediterranean herbs. *International Journal of Agriculture and Biological Engineering*, **8** (2), 145-150.
45. Ereifej, K.; Feng, H.; Rababah, T.; **Al'udatt, M.**; Gammoh, S. I.; Oweis, L. I. (2015). Effect of solvent and temperature on extraction of phenolics from wild edible plants, *Journal of Agriculture and Environmental Science*. Accepted, in Press.
46. Ereifej, K. I.; Feng, H.; Rababah, T.; Almajwal, A.; **Alu'datt, M.**; Gammoh, S. I.; Oweis, L. I. (2015). Chemical, composition, phenolics, anthocyanins concentration and antioxidant activity of ten wild edible plants. *Food and Nutrition Sciences*, **6** (7), 581-590.
47. **Alu'datt, M. H.**; Al-Rabadi, G. J.; Ismail, K.; Thenabat, R.; Ereifej, K.; Rababah, T.; Alhamad, M. N.; Torley, P. (2015). Characterization and biological properties of dry fermented product (jameed) manufactured from cow milk: comparison of sun and freeze – drying. *Journal of Food Processing and Preservation*, **39** (3), 282-291.
48. Rababah, T. M.; **Al-u'datt, M.**; Brewer, S. (2015). Jam processing and impact on composition of active compounds. Chapter 81: Processing and impact on active components in food, Ed. Victor R Preedy, Elsevier, 681-687.
49. **Alu'datt, M. H.**; Rababah, T.; Alhamad, M. N.; Gammoh, S.; Ereifej, K.; Johargy, A.; Kubow, S.; Almajwal, A. M.; Rawashdah, M. (2015). Optimization of phenolic contents, anti-oxidant and inhibitory activities of alpha-glucosidase and angiotensin converting (AC) enzymes from *Zingiber Officinale* Z. *International Journal of Food Properties*, DOI:10.1080/10942912.2015.1063066.
50. **Alu'datt, M. H.**; Rababah, T.; Johargy, A.; Gammoh, S.; Ereifej, K.; Alhamad, M.; Brewer, S. M.; Saati, A. A.; Kubow, S.; Rawashdah, D.; (2015). Extraction, optimisation and characterisation of phenolics from *Thymus vulgaris* L.: phenolic content and profiles in relation to antioxidant, antidiabetic and antihypertensive properties. *International Journal of Food Science and Technology*. In Press, DOI:10.1111/ijfs.12944.
51. **Alu'datt, M. H.**; Rababah, T.; Alhamad, M. N.; Obaidat, M.; Gammoh, S.; Ereifej, K.; Al-Ismail, K. Thenabat, R. (2016). Evaluation of different drying techniques on the nutritional and biofunctional properties of a traditional fermented sheep milk product. *Food Chemistry*. **190**, 436–441.
52. **Alu'datt, M. H.**; Rababah, T.; Alhamad, M. N.; Gammoh, S.; Ereifej, K.; Alodat, M.; Hussein, N.; Kubow, S.; Torley, P. J. (2016). Antioxidant and antihypertensive properties of phenolic-protein complexes in extracted protein fractions from *Nigella damascena* and *Nigella arvensis*. *Food Hydrocolloids*, **56**, 84-92.
53. **Alu'datt, M. H.**; Rababah, T.; Gammoh, S.; Ereifej, K.; Al-Mahasneh, M.; Kubow, S.; Tawalbeh, D. (2016). Multi-Volume SET (I-X) "Nanotechnology in Food Industry, Volume III: Emulsions. Emulsified Protein Filaments: Types, Preparation, Nutritional, Functional and Biological Properties of Mayonnaise. Elsevier. Accepted. In Process.
54. **Alu'datt, M. H.**; Rababah, T.; Alhamad, M.; Ereifej, K.; Al-Mahasneh, M.; Brewere, S.; Rawashdah D. (2016). optimization extraction conditions for phenolic compounds, antioxidant and inhibitory activities of angiotensin i-converting enzyme (ace),  $\alpha$ -glucosidase and  $\alpha$ -amylase from *mentha spicata* L. in Press. DOI: 10.1111/jfbc.12222.
55. Ereifej, K.I; Feng, H.; Rababah, T.M.; Tashtoush, S.; **Al-U'datt, M.H.**; Al-Rabadi, G.J; Torley, P.; Alkasrawi M. (2015). Microbiological status and nutritional composition of spices used in food preparation. *Food and Nutrition Sciences*, **6**, 1134-1140
56. **Alu'datt, M. H.**; Rababah, T.; Gammoh, S.; Ereifej, K.; Naimi, O.; Kubow, S. (2017). Multi-Volume SET (I-X) "**Handbook of Food Bioengineering**", Multi-Volume SET (I-XX): Application of virgin olive oil as nutraceutical and pharmaceutical food: Composition and bio-functional

constituents and their roles in functionality, therapeutic and nutraceutical properties. Elsevier. Accepted. In Process.

57. Ereifej, K.I.; Feng, H.; Rababah, T.M.; **Al-U'datt, M.H.**; Oweis, L.I.; Alkasrawi M. (2015). Separation and quantification of phenolic compounds of wild edible plants. *Journal of Plant Science and Research*, 2 (2), 139.
58. Al-Mahasneh, M.; Rababah, T.M.; **Al-U'datt, M.H.** (2016). Effect of palm oil (po) and distilled mono-glycerid (dmg) on oil separation and rheological properties of sesame paste. *Journal of Food Processing and Preservation*. Accepted. In press.

## Under Review Published Peer Reviewed Journal Articles

1. **Alu'datt, M. H.**; Rababah, T.; Ereifej, K.; Alhamad, M. N.; Alli, I. Raweshadeh, M. (2015). Optimization, characterization and biological properties of interacted phenolics with oil in *Rosmarinus officinalis*. *Journal of Essential Oil Research*, Under review.
2. **Alu'datt, M. H.**; Rababah, T.; Obaidat, M. M.; Kubow, S.; Inteaz Alli, I. (2015). The characterization and antioxidant activities of phenolic interactions identified from by-products of soybean and flaxseed protein isolation. *Food Hydrocolloids*, Under review.
3. Ereifej, K. I.; Alu'datt, M. H.; Feng, H.; Rababah, T.; Gammoh, S. I.; Saati, A. Oweis, L. I. (2015). RP-HPLC separation and quantification of phenolics of ten wild edible plants from Jordan. *Journal of Essential Oil Bearing Plants*, Under review.
4. **Alu'datt, M. H.**; Rababah, T.; Al-Rabadi, G. J.; Ereifej, K.; Tawalabeh, D.; Alhamad, M. (2015). Preparation, characterization and properties of mayonnaise from chickpea, broad bean and lupin protein. *Journal of Food Quality*, under review.
5. Al-Mahasneh, M.; Rababah, T.; **Alu'datt, M. H.** (2016). Effect of palm oil (po) and distilled mono-glycerid (dmg) on oil separation and rheological properties of sesame paste. *Journal of Food Processing and Preservation*. Under review.
6. Gammoh, S.; **Alu'datt, M. H.**; Alhamad; M. N.; Rababah; T.; Ereifej, K.; Johargy, A.; Hussein, N. M. (2016). Effects of protein-phenolic interaction on allergenicity, antioxidant activity, and inhibitory activities of angiotensin I-converting enzyme (ACE), and  $\alpha$ -amylase enzymes of wheat proteins fractions. *Cereal Science*, Under review.
7. **Alu'datt, M.**; Tranchant, C. C.; Alli, I. (2016). Occurrence, types, properties interactions of phenolic compounds with other food constituents in oil-bearing plants. *Trends in Food Science and Technology*, Under Review
8. **Alu'datt, M.**; Alli, I. Review of phenolic compounds in oil -bearing plants: distribution, identification and occurrence of phenolic compounds. *LWT-Food Science and Technology*, Under Review.
9. **Alu'datt, M.**; Alli, I. Investigating molecular characteristics of protein-phenolic interactions in soybean and flaxseed proteins using polyacrylamide gel electrophoresis, RP-HPLC analysis and electrospray ionization mass spectrometry. *Food Chemistry*, Under Review.
10. **Alu'datt, M.H.**; Rababah, T.; Alhamad, M.N.; Gammoh, S.; Ereifej, K.; Al-Karaki, G.; Ghozlan, K. (2015). **Extracted free and bound phenolics profiles from citrus fruits and their roles in biological system: content, antioxidant, anti-diabetic and anti hypertensive properties.** *Journal of Functional Food*, Under review.
11. **Alu'datt, M.H.**; Rababah, T.; Alhamad, M.N.; Gammoh, S.; Ereifej, K.; Al-Karaki, G.; Ghozlan, K. (2015). **Contents, antioxidant, biological properties and HPLC profile of extracted free and conjugated phenolics From Liliaceae, Punicaceae, Vitiaceae and Rosaceae families.** *Journal of Food Science*, Under Review.

## Conference Presentations

1. Alu'Datt, M.; Alli, I.; Ngadi, M. and Raghavan, G.S.V. (2003). Effect of physico-chemical factors on formation of whey protein and soy protein co-precipitates. Paper presented at the 2003 Annual Meeting of the CSAE. July, 6 - 9, Ste-Anne-de-Bellevue, Quebec, Canada.
2. Alu'Datt, M.; Alli, I. and Kermasha, S. (2004). Distribution of phenolic compounds in oil-seeds. Paper presented at the XX II International Conference in Polyphenols (ICP 2004). August, 24-29, Helsinki, Finland.
3. Alu'Datt, M.; Alli, I. and Kermasha, S. (2005). Phenolic-protein interactions in oil-seed protein isolates. Paper presented at the 2005 Annual Meeting of the IFT. July, 13 - 21, New Orleans, Louisiana, US.
4. Alu'Datt, M.; Alli I. (2006). Molecular Characterization of phenolic-protein interactions in oil-seed protein isolates. Paper presented at the 2006 Annual Meeting of the CIFST. May, 29, Montreal, Canada.
5. Alu'Datt, M.; Alli I. (2007). Isolation, characterization and distribution of phenolic compounds in olive by products. Paper presented at the 2007 "2<sup>nd</sup> International Congress on Food and Nutrition. October, 24-26, Istanbul, Turkey.
6. Ereifej, K.; Alu'Datt, M.; Owies, L. (2007). Chemical composition and mineral content of wild edible plants grown in Jordan. Paper presented at the 2007 "2<sup>nd</sup> International Congress on Food and Nutrition. October, 24-26, Istanbul, Turkey.
7. Alu'datt, M.; Ereifej, K.; Alrababeh, T.; Al-tawaha, A. (2008). Effects of supplementation of milk and soybean proteins on chemical, functional and baking properties of jordanian wheat flours. Paper presented at the 2008 CSNS Annual Scientific Meeting, May, 29 – 31, 2008, Toronto, Canada.
8. Alu'datt, M.H.; Ereifej K.I., Alkhaldi, H.A. Comparison and characterization of vitamin, fat and protein composition for camel's milk from eight Jordanian locations. Antalya-Turkey. 3<sup>rd</sup> International congress on food and nutrition, April 22-25, 2009.
9. Alu'datt, M.H., Alli, I.; Ereifej K.I. Optimization and characterization of various extraction conditions for phenolic compounds in olive seed. 5<sup>th</sup> International conference on Polyphenol Applications: Malta Polyphenols 2009, October 29 & 30<sup>th</sup>, 2009.
10. Alu'datt, M.H., Ereifej K.I., Alrababeh, T., Masadeh, N. Effects of barley flour and barley protein isolate on chemical, functional, nutritional and therapeutic properties of pita bread. Paper presented at the 2010 Annual Meeting of the CIFST. May, 30-June, 1, Winnipeg, Manitoba, Canada.
11. Alu'datt, M.H., Ereifej K.I. Optimization, characterization and quantification of phenolic compounds in olive cake. The 4<sup>th</sup> International Conference on Polyphenols and Health (ICPH2009). 7<sup>th</sup> – 10<sup>th</sup> December 2009. Yorkshire, England.
12. Alu'datt, M.H. Isolation and characterization of protein fractions from black cumin (*Nigella sativa*). Paper presented at the 2011 Annual Meeting of the CSC Conference - Congrès SCC. June, 5-9, Montreal, QC, Canada.
13. Alu'datt, M.H. Effect of barley additions on the physiochemical and sensory properties of bread. Paper presented at the conference European Biotechnology Congress 2011. Military Museum and Cultural Center, Istanbul, Turkey, 28 September- 1 October 2011.
14. Alu'datt, M.H.; Ereifej, K.I. Characterization and biological properties of dry fermented product (Jameed) manufactured from cow milk: Comparison of sun and freeze – drying. Paper presented at the conference of Eurofoodchem XVII, Military Museum and Cultural Center, Istanbul, Turkey, May 7-10<sup>th</sup>, 2013.

15. Ereifej, K.I.; Alu'datt, M.H. Effects of Sun and Freeze-Drying Techniques on Molecular, Fatty Acids and Therapeutic Properties of Fermented Goat Milk Product. Paper presented at the conference of Eurofoodchem XVII, Military Museum and Cultural Center, Istanbul, Turkey, May 7-10th, 2013.
16. Alu'datt, M.H. New Technology for Preparation of Mayonnaise from Extracted Plant Protein Isolates From Chickpea, Broad Bean and Lupin Flour: Chemical, Physiochemical, Nutritional and Therapeutic Properties. 11th Euro Fed Lipid Congress, "Oils, Fats and Lipids: New Strategies for a High Quality Future. 27- 30 October 2013, Antalya, Turkey.
17. Alu'datt, M.H. Effect of removal of free and bound phenolic compounds on molecular, chemical and biological properties of separated peptides from hydrolyzed protein fractions from Black cumin. Protein Engineering, Ottawa, Ontario, Canada, June 20-22, 2014.
- 18.

## **Conference Committees**

1. Organizing committee as member in Scientific Committee "The 2<sup>nd</sup> International Symposium on Medicinal Plants, Their Cultivation and Aspects of Uses" held from 3 to 4 November 2010 at the Petra Marriott Hotel in Petra, Jordan.
2. Organizing committee as member in Scientific Committee "The 2<sup>nd</sup> International Symposium on Medicinal Plants, Their Cultivation and Aspects of Uses" held from 19 to 23 November 2011 at the Petra Marriott Hotel in Petra, Jordan.
3. Organizing committee as member in Scientific Committee "The 3<sup>rd</sup> International Symposium on Medicinal Plants, Their Cultivation and Aspects of Uses" held from 19 to 24 November 2012 at the Petra Marriott Hotel in Petra, Jordan.
4. Organizing committee as member in Scientific Committee "Seventh Scientific Agricultural Conference (SSAC-2012)" Faculty of Agriculture of Jordan University of Science and Technology in Irbid, Jordan, during the period 8-10 October 2012. SSAC-2012.

## **Administration**

### **Member of Promotion Committees**

Promotion from Assistant Professor to Associate Professor (Dr. Anas Al-nabulsi, Dr. Sofyan Maghaideh, Leith Alrousan, Khaili Jawaserh, Kamal Zouhdi)

### **University Administration/Committees:**

Department Head	2011-2013
Chair Department Graduate Committee	2011-2013
Chair Department Curriculum Committee	2011-2013
Member Department Graduate Committee	2011-2013
Member Faculty Curriculum Committee	2011-2013, 2014-2015
Member Faculty Conference Committee	2012
Department Representative in Faculty Committee	2010, 2011, 2012 and 2013. 2015
Member Department Graduate Committee	2010, 2009 and 2013, 2014, 2015
Member Department research committee	2015

## Other Skills

### Languages

- **Arabic:** Native language.
- **English:** Speaks fluently and read/ write with high proficiency.
- **French:** Basic

### Computer Skills

- **Languages:** FORTRAN, BASIC.
- **Applications:** MS Word, MS Excel, MS PowerPoint
- **Statistical Software:** SAS, JMP

### Professional Affiliations

- Member of Institute of Food Technologists (IFT) / USA (2005).
- Agricultural Engineer Association/Jordan (1999).
- Canadian Institute of Food Science and Technology (CIFST) (2006).

### Scholarship and Awards

- **2005-2006** Assistantship from McGill University.
- **2001-2006** Scholarship from the Jordan University of Science and Technology to undertake Graduate Studies (Master and Ph.D) in Canada.
- **1997-1999** Undergraduate Scholarship, Ministry of Higher Education, Jordan.
- **1995-1999** Undergraduate partial Scholarship from Jordan University of Science and Technology.

### Honor List

- Ministry of Higher Education Honor List (Jordan 1997, 1998 and 1999).
- Faculty Honor List for Years (1997, 1998 and 1999).
- University Honor List for Years (1998 and 1999).
- Honored by Princess (1999) (Princess Aisha Al-hussein).
- Honored by Queen of Jordan (1999) (Queen Rania Al-ubdallah).
- Honored by the Principal of the Jordan University of Science and Technology (1996, 1997, 1998 and 1999).
- Award Plaques Food Chemistry Grad Poster Competition (2005) Annual Meeting of the IFT. [New Orleans, Louisiana](#), US.

## References

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