

Curriculum Vitae

Prof. Saddam Sh. J. Awaisheh

(Professor of Food Science and Nutrition)



Personal Information:

Date and Place of Birth: June 1st, 1973, Amman_ Jordan.

Nationality: Jordanian.

Marital Status: Married with four children.

Languages: Arabic & English.

Computer Skills: ICDL, Word, Excel... etc.

Personal contacts:

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Balqa Applied Univ. Salt _ Jordan. P.O. Box. 19117.

Rewards and Achievements:

Outstanding Arab Researcher Award, The development of Novel Functional

and Medical Foods , Association of Arab Universities, UAEU, Al-Ein, Oct. 2017

- حاصل على جائزة الباحث العربي المتميز, تطوير الأغذية الوظيفية والطبية, والممنوحة من اتحاد جامعات الدول

العربية – جامعة الامارات العربية المتحدة – العين- تشرين الاول, 2017

Professional Experience:

- **2012-2015:** Member of Al-Balqa Applied University Board.
- **2014-2017:** Dean Assistant for Students Affairs, Al-Balqa Applied University.
- **2009- 2010:** Head of Food Processing & Nutrition Dept., Faculty of Agriculture-Mu'tah Univ.
- **2008- 2009:** Technical manager, Head of Laboratories Division - Aqaba Food and Environment International Labs. Aqaba Special Economic Zone Authority (ASEZA)-Jordan. EU-HKJ Joint Project.
(منطقة العقبة الاقتصادية الخاصة- الاردن)
- **2005-2007:** Member of Mu'tah University Board.

Academic Experience:

- Sept, 2014- Now:** Professor, Dept. of Food Processing and Nutrition, Faculty of Agri., Balqa Applied Univ. Salt _ Jordan.
- Oct, 2010- Sept, 2014:** Associate Prof.: Dept. of Food Processing and Nutrition, Faculty of Agri., Balqa Applied Univ. Salt _ Jordan.
- Jan. - Oct., 2010:** Associate Prof.: Dept. of Food Processing and Nutrition, Faculty of Agri., Mu'tah Univ. Karak _ Jordan.
- 2004- 2010:** Assistant Prof.: Dept. of Food Processing and Nutrition, Faculty of Agri., Mu'tah Univ. Karak_ Jordan.
- 2000- 2003:** Ph.D. Research and Teaching Assistant in Food Science and Nutrition Dept., Univ. of Jordan.

Educational Background:

Ph.D. Food Science and Technology/ Functional Foods, Safety, and Biotechnology, Univ. of Jordan, 2003.

M.Sc. Food science and Technology/ Food Microbiology, Safety, and Hygiene, Univ. of Jordan, May, 1998.

B.Sc. Food Processing & Nutrition, Univ. of Jordan, June, 1995

International Evaluation:

- Research gate: RG-index : 19.96
- Google-Scholar: H-index : 15
- Scopus H-index: 10

International Index and Database:

ORCID ID: 0000-0003-3477-2116

SCOPUS ID: 86017379

ResearcherID: F-6437-2011

resn.hcst ID: 6041

✚ Academic qualifications and philosophy

Undergraduate teaching and mentoring

As a conclusion of my long successful history of teaching, around 20 years, I believe that the success in teaching process is based on three critical fundamental units: knowledge, critical thinking, and curiosity. These basic units have an enduring, cyclical relationship. Knowledge helps us to understand the world around us as well as ourselves, critical thinking gives us the ability to incorporate knowledge and apply it endlessly, and curiosity is the result of realizing the limitations of current knowledge and drives us to acquire additional knowledge. I see my role as a teacher as one of transferring a fundamental knowledge of food science and technology to students while cultivating their critical thinking skills through the application and group-discussion of theories and concepts of food importance and significance to current human health-, economic-, and industry-related issues. As a teacher, I strive to instill a sense of curiosity in my students and put them in a challenge to fill this void. I do this by serving as a role model in the sense that I am too searching for knowledge – for me, for them and for the future. I demonstrate my own critical thinking skills and share my curiosity for the unexplained or unexamined theories and concepts. As a teacher, I must use innovative teaching methods, respond enthusiastically to questions, and encourage our students to enthusiastically seek knowledge. In the case of international students that may be struggling with Arabic or English as a second language, I often tend to merge between conventional textbook teaching, e-learning, and audiovisual methods to ensure the entire class develops the requisite skills and grasps the information presented to be successful in the future. Interaction with students outside the classroom is integral to the teaching process. Beside office hours, I encourage students to visit when they have an opportunity, and discuss issues relevant to the course and their undergraduate or graduate future. I also encourage students to contact me by Email, a particularly useful communication tool for students that are employed full time or may travel extensively. I do not want students to feel I am unapproachable, creating an atmosphere make the students feel I am always interested in their concerns. My ultimate goal in teaching is to create a challenge inside the students, provide requisite knowledge, encourage and develop critical thinking skills, and stimulate natural curiosity that will guide students in their efforts of pursuing success. By accomplishing this, I will satisfy the need within myself to somehow make a difference.

Graduate and postgraduate advising and mentoring

In addition to the above mentioned work philosophy, I take a more collaborative approach to advise and mentor graduate students. I'd like to talk with them about how we can work together in our lab to pursue ideas and set up experiments and collect the data of study, which will lead toward their theses and degrees. I discuss what their career interests are, especially to discern what they would like to be doing after they finish their degrees. By having a research program that involves field activities and travel, I often get to travel with the students, so we get the chance to discuss current and new research ideas, how things work, and ways to address research questions. Through this process, we usually can come up with areas of mutual interest and a process to study them. During laboratory and field works, we discuss the best way to make decision and solve problems they may be having in collection, analyzing, interpretation and reporting research data. I let the graduate students take as much lead in the work as possible but work with them closely when there are problems or guidance is needed. We also get to know each other well, and by the time their work is ending, we discuss the next steps that they want to take with employment, and I help them with job applications and recommendations. Through this process, I have realized that it is best to pick graduate students who have interests in the types of work that I conduct in my lab, and to spell out as clearly as possible my expectations and goals as early as possible in the mentoring process. This has led to successful collaboration with the graduate students I have worked with, to them finding jobs that satisfy them, and to lasting interactions and friendships.

✚ Teaching Experience and Qualifications

For almost 2 decades of active teaching in the field of food science and technology, I have enthusiastically taught several basic, applied and advanced courses in four official Universities. These courses have comprehensively been conveyed to thousands of undergraduate, graduate, and continuing students. In addition to contributing to the design and actual teaching of several courses in food science and engineering, I always try to connect the course materials with the real after-graduation life of students.

Due to the strong scientific background in food science, technology, chemistry, analysis, microbiology, safety & hygiene, and product development, and the immense practical and research experiences, I was very qualified to successfully teach a wide range of undergraduate and graduate courses over almost 20 years. I started my teaching experience as a teaching assistant for 5 years in the university of Jordan (during my MSc and Ph.D. degrees), followed by 15 years as a full time teaching professor in Mu'tah University (2004-2010), and Al-Balqa' Applied University (2010-2018). I worked also as a part time professor in Jordan Univ. of Sci. & Tech. (2017). During my long teaching experience, I have taught several courses (listed in attached CV) in Food Chemistry, Food Analysis, Instrumental Food Analysis, Food Science, Food Processing & Preservation, Food packaging, Meat Sci. & Tech., General Microbiology, Food Microbiology, Food Safety & Hygiene, Food Quality Control, Principles of Nutrition, and Human Nutrition for BSc and MSc students.

My teaching responsibilities included design and preparation of the courses theoretical and practical materials, actual teaching of theoretical part, supervision and teaching of practical part, preparation of the exams, quizzes, and any other evaluation materials, preparation and supervision of the student's scientific assignments. In addition, for a long time I have supervised a course entitled "Scientific Graduation Project", in which the students are queried to develop and conduct a research idea in the field of food science and technology at the BSc level. This course is considered as a thought-provoking opportunity for students to practice skills of research, critical thinking, and data analysis, interpretation, and presentation.

A statement of research accomplishments and interests

In the last few decades, a radical change in the understanding of the role of food in human health promotion has been observed. This understanding has changed from the primary role of food as the source of energy and body-building components to the more-subtle effects of bioactive food components on human health. In addition, there has been an increasing public awareness about the role of foods in the well-being and life prolongation as well as in the prevention and treatment of cancer, cardiovascular diseases, diabetes, obesity and osteoporosis. Accordingly, a new category of health-promoting foods has emerged in the food market. This new food category has been known as functional foods. Functional foods is defined as “any modified food or food ingredients that may provide health benefits beyond that conferred by the traditional nutrients the food contains”. Another new concept in functional foods is the symbiotic foods, the food containing more than one functional components in order to maximize the health benefits of functional foods. The active and efficient research in the design and development of new functional foods requires a strong background in food processing, preservation, chemistry, microbiology, safety, and product design and development, as well as in human and clinical nutrition. The large number of courses in food science and nutrition taken during my undergraduate and graduate studies, and those given during two decades of full time teaching had immensely empowered me to fulfill these requirements to develop several novel functional foods and to achieve outstanding achievements in both academic and industrial fields. In addition, my work as a technical manager of Aqaba International Food and Environment Laboratories (2008-2009) (EU funded projects, 25 million Euros), has greatly improved my experience and skills in food safety and quality analysis using up-to-date analysis techniques in food and environmental issues, such as LC/MS/MS, GC/MS, ICP/MS, AAS, and ELISA techniques.

My high research experience and quality, particularly the national and international collaborative researches, the high quality of research outcomes and the journals in which I have published my publications (Listed in CV), reflects an outstanding organizational skills, enthusiastic and cooperative hard working personality with the ability to work confidently in group situations and successfully complete multiple tasks with favorable

results despite deadline pressure. I am able to also recognize the importance of a strong work ethics, persistence, and intellectual integrity with excellent communication skills.

During the last 15 years of my academic life, I have raised the funds of 12 funded projects, with the sum of around 500,000 \$. Most of these funded projects were national and international joint projects that were supervised by I. These projects have been successfully completed with very fascinating results and outcomes. Moreover, the outcomes of my research have directed to bridge the gap between the scientific and industrial fields through the cooperation with several national and international industrial firms, including dairy, bakery, cereal, and meat processing companies to design and develop many functional food products. In addition, research collaboration with the international scientific research centers in USA, EU, and Canada directed to expand the scope of research and applications of functional food products. My cooperation with the national food processing firms resulted in the development of many novel functional food products, such as bakery and dairy products and beverages enriched with phytosterols for patients with CHD, development of novel bakery products enriched with vitamin D and Calcium for prevention and treatment of osteoporosis, development of dairy products enriched with probiotics of anticancer activity, development of another dairy product enriched with EOs of anticancer activity, and develop a novel high quality low cost commercial Gluten-free flour for general bakery purposes for celiac patients. Collaboration with the national and international academic and industrial partners has led to publish more than 25 high quality papers in very prestigious impacted journals, and 2 book chapters. These publications focused on the latest technologies and applications in the field of design and development of new novel functional foods and beverages.

Research Interest:

- Assess and evaluate the safety (Microbial & Chemical) and quality criteria of different food and beverages products, with emphasizing the modern technologies to control and improve these factors.
- Replacement of synthetic food additives (antimicrobial and antioxidants) by safe and natural alternatives in dairy, meat, bakery, and cereal food products.
- Design and development of novel added-value food products and beverages, specially functional foods and beverages oriented to prevent and mitigate chronic modern-life induced diseases, such as cancer, diabetes, obesity, CHD, and osteoporosis.
- Apply nanotechnology in the development of novel value-added foods and beverages.
- Design and development of novel added-value cereal food products for consumers with special nutritional needs, such as celiac and PKU patients.

Current Research Activities

- ✚ Evaluation the microbial and chemical safety and quality criteria of different food products, such as baby foods, meat, poultry, processed foods, juices, beverages and water products. **(5 funded projects, 10 publications)**
- ✚ Replacement of synthetic food additives (antimicrobial and antioxidants) by safe and natural plant extracts. **(2 funded researches, 4 publications, 2 international conferences)**
- ✚ Survey the residues of different organic and inorganic contaminants in foods and beverages, such as Melamine, Aflatoxins, growth hormones and antibiotics residues, using LC/MS/MS, GC/MS, AAS, and ELISA techniques.

- ✚ Develop commercial novel functional food and beverage products to lower serum cholesterol and improve heart health, such as cheese, yogurt, and bakery products. **(4 funded projects, 5 publications, 6 commercial products)**
- ✚ Study the application of nanotechnology in the design and development of novel functional foods and beverages by using bioactive plant and probiotic compounds to prevent and mitigate cancer, diabetes, obesity, and coronary heart diseases. **(2 funded projects)**
- ✚ Study the application of nanotechnology in food fortification such as the design and development of vitamin D fortified food for osteoporosis prevention and treatment.
- ✚ Screen the anticancer, anti-inflammatory effects of domestic medicinal plant and probiotic bacteria. **(1 funded project, 1 publication)**
- ✚ Supervision of master research entitled “The anticancer, anti-inflammatory, antimicrobial effects of plant phytosomes using essential oils and probiotic bacteria”. **(Completed, 2017)**

Impactful Research Achievements:

- ✚ Awarded as “**Outstanding Arab Researcher Reward**” from **The Association of Arab Universities**, in the field of: Design and development functional foods. **(2017)**
- ✚ Design and development of 6 commercial functional food products oriented to lower serum cholesterol and improve heart health, and to prevent cancers, including 3 bakery and 3 dairy products in cooperation with the biggest food companies in Jordan. **(2014-2018)**
- ✚ Design and develop a novel high quality low cost commercial Gluten-free flour for general bakery purposes for celiac patients. **(1 funded project)**
- ✚ Based on the results of 3 researches, the action has been taken to modify and change the safety regulations and specifications of 4 Jordanian official food standards.
- ✚ Publishing 25 publications in the most prestigious peer-reviewed and impacted Food Science,

Food Processing, Food Protection, Food Control, and Nutrition journals. (2004-2018)

- ✚ Publishing 2 book chapters with CRC and InTech Publishers in Europe. One of these chapters has been cited and downloaded for more than 8000 times, 2200 times in USA. (2012-2014)
- ✚ A Paper published in International dairy Journal: Recognized as **top 25 within Elsevier journals.** (2005)
- ✚ Development of Melamine analysis method in powdered milk and milk products in Ben-Hayyan Labs., ASEZA-Aqaba. (2008-2009).

International & National Joint Research:

- ✚ An international Joint research with **Prof. Salam Ibrahim, Prof. Shahbazi, and Prof. Tahergorabi**, from **Dept. of Food Processing and Biotechnology, North Carolina A&T State Univ., USA**, is undergoing to develop many novel techniques in functional food processing, preservation and safety, including processing of novel functional probiotic products. So far, this collaboration resulted in 10 publications and 5 under publication papers.
- ✚ An international Joint research with **Prof. Susan Brewer, Department of Food Science and Human Nutrition, University of Illinois at Urbana-Champaign, Urbana, IL, USA**, has started to study the hypocholesterolemic effects of bioactive probiotic and plant extracts in order to develop novel functional food products. So far, this collaboration resulted in 1 publication.
- ✚ A national joint research with **Prof. Anas Nabulsi, Prof. Taha Rababah, and Prof. Mohamad Khalifeh, Dept. of Food Technology & Dept. of Animal Veterinary, JUST, Jordan**, is undergoing to study the effect of different new food processing technologies in the safety and quality criteria of different food products, beside studying the replacement of synthetic food preservatives by natural and safe alternatives. So far, this collaboration resulted in 8 publications and 7 under publications papers.
- ✚ A national joint research with **Prof. Areej Assaf, Faculty of Pharmacy, University of Jordan, Jordan**, is undergoing to study the anticancer, anti-inflammatory, immune posting effect of different plant

and probiotic bacteria at the molecular level in order to develop novel functional products oriented to prevent and mitigate cancers, inflammation, and improve human immunity. So far, this collaboration resulted in 1 publication and 4 under publications papers.

Publications:

Submitted and under submission publications:

1. **Saddam A. Awaisheh. 2019.** Incidence and contamination level of mycotoxins in milk- and cereal-based baby formula in Jordan. **Food Control. (Under Submission).**
2. **Saddam A. Awaisheh, Mohamad S. Khalifeh. 2019.** Occurrence and contamination level of legal and illegal antibiotics in poultry meat consumed in Jordan. **Food Control. (Under Submission).**
3. **Saddam A. Awaisheh, Mohamad S. Khalifeh, Razan R. Rahahleh. 2019.** Occurrence and contamination level of Ractopamine and β -agonist hormones in red meat consumed in Jordan. **Food Control. (Under Submission).**
4. **Saddam A. Awaisheh, Mohamad S. Khalifeh, Razan R. Rahahleh. 2019.** Occurrence and contamination level of different growth hormones in red meat consumed in Jordan. **Inter J Food Micro. (Under Submission).**
5. **Saddam S. Awaisheh. 2019.** A novel high quality Gluten-free mixed flour formulation for general bakery purposes: Chemical, physicochemical and sensory criteria. **J Food Sci. & Tech.**
6. **Saddam S. Awaisheh. 2019.** Composition, chemical, physicochemical and sensory properties of cholesterol-lowering phytosterols enriched toast bread. **Journal Cereal Science. (USA)**
7. **Saddam S. Awaisheh. 2019.** Design and development of mixed probiotic yogurt drink: Processing, microbiological, physicochemical and sensory kinetics. **J Dairy Sci.**

8. **Saddam S. Awaisheh**, Taha M. Rababah, Razan J. Rahahleh. **2019**. Nanoencapsulated kefir culture to develop a novel white soft cheese: Microbiological, physicochemical and sensory properties. **Inter. Dairy J. (Under Submission). (UK)**
9. **Saddam S. Awaisheh**, Anas A. Al-Nabulsi, Hosam J. Al-Tamimi, Salam A. Ibrahim, Razan J. Rahahleh. **2018**. The hypocholesterolemic effects of phytosterols and isoflavones co-fermented with probiotic bacteria in hypercholesterolemic rats model. **Inter. J. Dairy Tech. (Submitted).**
10. **Saddam S. Awaisheh**, Maher M. Obeidat, Razan J. Rahahleh, Areej Assaf, and Salam A. Ibrahim. **2018**. The anticancer, antimicrobial, and antioxidant activity of selected Jordanian medicinal herbs against CaCo-2 and HRT-18 human colorectal cancer cell lines. **Ethnopharmacology (Under submission). (Elsevier, UK)**
11. **Saddam S. Awaisheh**, Maher M. Obeidat, Razan J. Rahahleh, Salam A. Ibrahim. **2018**. The anticancer, antimicrobial, and antioxidant activity of domestic Jordanian medicinal herbs against U-266 and MCF-7 human cancer cell lines. **Ethno pharmacology (Under submission). (Elsevier, UK)**
12. **Saddam S. Awaisheh**, Maher M. Obeidat, Razan J. Rahahleh, Mazen Atyat, Ammal M. Abbadi. **2018**. The anticancer, antimicrobial, and antioxidant activity of green tea extracts against 4 different human cancer cell lines. **Molecules. (Under submission). (USA)**
13. **Saddam S. Awaisheh**, Maher M. Obeidat, Razan J. Rahahleh, Salam A. Ibrahim. **2018**. The anticancer effect of selected local probiotic isolates against CaCo-2 and HRT-18 human colorectal cancer cell lines. **Cancer Prevention Research (Under submission). (USA)**
14. **Saddam S. Awaisheh**, Anas A. Al-Nabulsi. **2018**. Isoflavones and phytosterols mitigate body weight gain and hypercholesterolemia. **J Nutrition. (Under Submission). (USA)**

✚ Published papers:

1. **Saddam S. Awaisheh**, Razan J. Rahahleh, Sharaf S. Omar, Maher M. Al-Dabbas, Moawiya A. Haddad, and Salam A. Ibrahim. 2020. Efficacy of Cinnamon and Qysoom Essential Oils, Alone and in Combination, to retard Lipid Oxidation in Olive Oil and Frozen Beef-Burger Models. *J. Food Chemistry & Nanotechnology*. 6(3): 117-123.
2. **Saddam S. Awaisheh**, Mohammad S. Khalifeh, Razan J. Rahahleh, Ja'far M. Al-Khaza'leh and Rania M. Algroom. **2019**. Sulfamethazine contamination level and exposure assessment in domestic and imported poultry meats in Jordan. *Veterinary World*. 12 (12). 1992-1997.
3. **Saddam S. Awaisheh**, Razan J. Rahahleh, Rania M. Algroom, Ala'a A. Al-Bakheit, Ja'far M. Al-Khaza'leh, Basim A. Al-Dababseh. **2019**. Contamination level and exposure assessment of Aflatoxin M1 in infant milk formula by Jordanian infants. **Italian J Food Safety**.
4. TA Hosam Al-Tamimi, Amani Al-Dawood, **Saddam S Awaisheh**. **2019**. Resveratrol mitigates hypercholesterolemia exacerbated hyperthermia in chronically heat-stressed rats. **Veterinary World** 12 (2), 337-344.
5. **Saddam S. Awaisheh**, Anas A. Al-Nabulsi, Hosam J. Al-Tamimi, Razan J. Rahahleh. **2018**. Isoflavones and Phytosterols Enriched Milk Mitigates Body Weight Gain & Hypercholesterolemia, And Modulate Steroids And Thyroids Hormones In Sprague-Dawley Rats. *Inter. Confer. On Food, Nutrition, and Dietetics: Gastronomy Research, Alanya, Turkey*.
6. **Saddam S. Awaisheh**, Maher M. Obeidat, Hosam J. Tamimi, Areej M. Assaf, Razan J. Rahahleh. **2016**. Probiotic anti-carcinogenic effects on different human colorectal cancer cell lines. **Milchwissenschaft. (Germany)**. **69 (1): 27-31**.
7. **Saddam S. Awaisheh**, Taha, M. Rababah, Razan, J. Rahahleh, Mouawiah, A. Haddad, Rania, Al-Groom, Salam, A. Ibrahim. **2016**. Development of a novel white soft cheese using kefir starter

cultures: Microbiological, physicochemical and sensory properties. **Milchwissenschaft. (Germany).**
69 (1): 18-22.

8. Rababah, T., Al-Tamimi J. Hosam, **Awaisheh S. Saddam**, Brewer Suzan. **2015.** The hypocholesterolemic and hormones modulation effects of isoflavones alone or co-fermented with probiotic bacteria in hypercholesterolemic rats model. **International Journal Food Science & Nutrition.** 66(5): 546–552. **(UK).**
9. Anas A. Al-Nabulsi, **Saddam S. Awaisheh**, Tareq M. Osaili, Amin N. Olaimat, Razan J. Rahahaleh, Fawzi M. Al-Dabbas, Lina A. Al-Kharabsheh, Rabin Gyawali, Salam A. Ibrahim. **2015.** Inactivation of *Cronobacter sakazakii* in Reconstituted Infant Milk Formula by Plant Essential Oils. **Journal Applied Botany & Food Quality.** 88, 97 – 101. **(Germany).**
10. M.S. Khalifeh, **Saddam S. Awaisheh**, O.H. Alameri and W.M. Hananeh. **2015.** Small intestine mucosal immune system response to high fat high cholesterol dietary supplementation to male rats. **Food and Agricultural Immunology.** 26 (2): 293-304. **(UK)**
11. Anas A. AL-Nabulsi, Tareq M. Osaili, Heba M. Obaidat, Reyad R. Shaker, **Saddam S. Awaisheh**, and Richard A. Holley. **2014.** Inactivation of Stressed Escherichia coli O157:H7 Cells on the Surfaces of Rocket Salad Leaves by Chlorine and Peroxyacetic Acid. **J Food Protection.** 77 (1):32–39. **(USA)**
12. Anas Al-Nabulsi, Reyad Shaker, Tareq Osaili, Mahmoud Al-Taani, Amin Olaimat, **Saddam Awaisheh**, Aisha Abushelaibi and Richard Holley. **2014.** Sensory Evaluation of Flavored Soy Milk-Based Yogurt: A Comparison between Jordanian and Malaysian Consumers. **Journal of Food Science and Engineering.** 4 (2): 27-35. **(USA)**
13. Taha M. Rababah, Majdi Al-Mahasneh, Muhammad Al-U'datt, Khalil Ereifej, Isra`a Kilani, Ali Almajwal, Susan Brewer, Wade Yang and **Saddam Awaisheh.** **2014.** Effect of Jam Processing on

- Physicochemical Properties of Different Fruits During Storage. **J Food, Agriculture & Enviro.** – **JFAE.** 12(2): 277-280. (Finland)
14. **Saddam S. Awaisheh. 2014.** Inactivation of *E. coli* O157:H7 on Rocket Leaves by Eucalyptus and Wild-Thyme Essential Oils. Proceeding Book of the National Conference on Advances in Environmental Science & Technology, NCAT, **North Carolina, USA.**
15. Hassan, O. A., A. A. AbuGhazaleh, and S. A. Ibrahim, O. Isikhuemhen, **S. S. Awaisheh, R. Tahergorabi. 2014.** Viability and α - and β -Galactosidase Activity of *Bifidobacterium breve* ATCC 15701 and *Lactobacillus reuteri* DSM20016 in Yogurt Products Supplemented with Shiitake Mushroom Extract during Refrigerated Storage. **Inter. J. Dairy Tech.**570-576.(UK)
16. Azmi D. Hawari, Maher Obeidat, **Saddam Sh. Awaisheh,** Hala I. Al-Daghistani, Amal A. Al-Abbadi, Sharaf S. Omar, Issam M. Qrunfleh, Hani M. Al-Dmoor and Jafar El-Qudah. **2014.** Prevalence of mastitis pathogens and their resistance against antimicrobial agents in Awassi sheep in AL-Balqa province in Jordan. **American J Animal and Veterinary Sci.** 9 (2):116-121. (USA)
17. **Awaisheh, S.S. 2013.** Efficacy of Fir and Qysoom essential oils, alone and in combination, in controlling *Listeria monocytogenes* in vitro and in RTE meat products model. **Food Control.** 34: 657-661. (Elsevier-UK)
18. **Awaisheh S. S.,** Anas A. Al-Nabulsi, Tareq M. Osaili, Salam Ibrahim, and Richard Holley. 2013. Inhibition of *Cronobacter sakazakii* by Heat Labile Bacteriocins Produced by Probiotic LAB Isolated from Healthy Infants. **J Food Sci.** 78 (9):M1416-1420. (USA)
19. **Awaisheh, S. S.,** M. S. Khalifeh, M. A. Al-Ruwaili, O. M. Khalil, O. H. Al-Ameri, and R. Al-Groom. 2013. Effect of supplementation of probiotics and phytosterols alone or in combination on serum and hepatic lipid profiles and thyroid hormones of hypercholesterolemic rats. **J Dairy Sci.** 96:9-15. (USA)

20. Saeed A. Hayek, Aboghasem Shahbazi, **Saddam S. Awaisheh**, Nagendra P. Shah, and Salam A. Ibrahim. **2013**. Sweet potato as a basic component in developing a medium for the cultivation of lactobacilli. **Bioscience, Biotech, and Biochemistry**. 77 (11):2248-2254. **(Japan)**
21. **Awaisheh, S.S.**, Al-Dmoor, H.M., Omar, S.S., Hawari, A., Al-Rwaily, M.M. 2012. Impact of selected nutraceuticals on viability of probiotic strains in milk during refrigerated storage at 4°C for 15 days. **International Journal of Dairy Technology**. 65 (2):268-273. **(UK)**
22. **Awaisheh, S. S.** 2011. Development of probiotic soft cheese manufactured using goat's milk with the addition of thyme. **MilchWissenSchafft**. 66 (1):51-54. **(Germany)**
23. **Awaisheh, S.S.** 2010. Incidence and level contamination of *Listeria monocytogenes* and other *Listeria* spp. in ready to eat meat products in Jordan. **J. Food Protection**. 73 (3), 535- 540. **(USA)**
24. Salam A. Ibrahim & Awfa Y. Alazzeah & **Saddam S. Awaisheh** & Danfeng Song & Abolghasem Shahbazi & Amer A. AbuGhazaleh. 2010. Enhancement of α - and β -Galactosidase Activity in *Lactobacillus reuteri* by Different Metal Ions. **Biological Trace Elements Research**. 136(1):106-116. **(USA)**.
25. **Awaisheh, S. S.** and Ibrahim, S. A. 2009. Screening of antibacterial activity of lactic acid bacteria against different pathogens found in vacuum packaged meat products. **Foodborne Pathogens and Disease**. 6 (9): 115-123. **(USA)**
26. **Awaisheh, S. S.** 2009. Survey of *Listeria monocytogenes* and Other *Listeria* spp. Contamination in Different Common Ready-to-Eat Food Products in Jordan. **Pakistan J. Biological Science**. 12 (23), 1491- 1497.
27. **Awaisheh, S. S.**; M. S. Hadaddin, and R. K. Robinson. 2005. Incorporation of selected nutraceuticals and probiotic bacteria into fermented dairy product. **Inter. Dairy J.** (15) 1184- 1190. **(Elsevier-UK)**

28. M. S. Hadaddin, **S. S. Awaisheh**, and R. K. Robinson. 2005. Production of yogurt by using probiotic bacteria isolated from infants in Jordan. **Pakistan J. of Nutrition**. 3 (5): 245- 254.

Books/Chapter of Books:

1. Al-Nabulsi, A. Anas; **Awaisheh, S. Saddam**; Ibrahim, A. Salam; Hayek, A. Saeed; and El-Qudah, M. Jafar. **2015. Chapter 22:** Health benefits of symbiotic functional food products. PP: 395-412. In: Beneficial Microbes in Fermented and Functional Foods. Eds: Shankar, R. Rai and Jamuna A. Bai. **CRC Company, Taylor & Francis Group. ISBN: 13: 978-1-4822-0663-0.**
 2. **Saddam S. Awaisheh. 2012. Chapter 25***. Probiotic Food Products Classes, Types, and Processing, Probiotics. **PP# 551-582.** Prof. Everlon Rigobelo (Ed.), ISBN: 978-953-51-0776-7, **InTech**, DOI: 10.5772/51267. Available from: <http://www.intechopen.com/books/probiotics/probiotic-food-products-classes-types-and-processing>.
- ❖ This chapter has been cited, viewed, and down loaded for more than 10,000 times, 2850 times in USA.

Impact Factors of Journal published till 2016:

	<u>IF</u>	<u>H-index</u>
1. Journal of Ethno Pharmacology	3.56	126
2. Journal of Nutrition	4.592	88
3. Cancer Prevention Research	5.269	43
4. Food Control	3.328	49
5. Journal of Dairy Science	2.566	111
6. International Dairy Journal	2.333	87
7. Foodborne Pathogens Disease	2.283	33
8. Biological Trace Element Research	1.920	47
9. Journal Food Protection	1.830	84
10. Journal Food Science	1.775	75
11. Bioscience, Biotechnology, and Biochemistry	1.292	71
12. International J. Food Science & Nutrition	1.202	53
13. International Journal Dairy Technology	1.009	26
14. Journal Applied Botany & Food Quality	0.814	24
15. Food and Agriculture Immunology	0.730	22
16. Journal Food, Agriculture, and Environment	0.517	14
17. Milchwissenschaft	0.416	28

Supervisor of master and Ph.D. Thesis:

- **Master thesis:** Razan, J. Rahahleh. M.Sc. thesis entitled “Anticancer, anti-inflammatory and antimicrobial activities of some probiotics and plant EOs phytosomes combinations”. 2017. (Completed)

Member of Defense Committee of Academic Degree:

1. **External Examiner.**

Master thesis, Ayah W. Lawees. Study the biochemical changes in hormones, trace elements, and Interleukins in infertile Jordanian women. Balqa’ Applied University. Faculty of Graduate Studies. **2016.**

2. **External Examiner.**

Master Thesis: Majdoleen Majed Shannek. Effect of processing and storage on the physicochemical characteristics and phenol, antioxidants, flavonoids and anthocyanin’s properties of dates, carob, and pomegranates molasses. Jordan University of Science & Tech. Faculty of Graduate Studies. **2015.**

3. **External Examiner.**

Master thesis, Habis Al-Shawabkah. Assessing Biosafety and Biosecurity practices in the Bioscience Laboratories of Jordan according to the third edition of the WHO laboratory biosafety manual. Princess Sumaya University for Technology King Abdulla I Faculty of Graduate Studies. **2014.**

4. **External Examiner.**

Master Thesis, Tony Abdullah. Thermophysiological Responses of Heat and Immune-challenged Hypercholesterolemic Rats, Treated with Resveratrol. Faculty of Graduate Studies. Jordan Univ. of Science & Technology. **2014.**

5. **External Examiner.**

Master Thesis, Haneen Tarawneh, Investigation of the Use of Probiotic Bacteria in the production of Labaneh. Faculty of Graduate Studies. University of Jordan. **2014.**

6. **External Examiner.**

Master Thesis, Suhad Abo Odeh, Enumeration and Characterization of Probiotic in Commercial Probiotic Products and Development of A Method for Resuscitation of Probiotic Bacteria. Faculty of Graduate Studies. University of Jordan. **2013.**

7. **External Examiner.**

Master thesis, Heba Obiedat. Effects of Different Sanitizers on The Stressed E. coli O157:H7 Cells Attached to Rocket Leaves Surfaces. Faculty of Graduate Studies. Jordan Univ. of Science & Technology. **2013.**

Member of committees of evaluation and judgment:

• **Head of evaluators of the Faculty For Factory (FFF) National Program (2004-2014):**

Evaluation and judgment of proposal studies and final reports of more than **160 studies** during the period of **2004-2014** through the national FFF program.

• **Member of the Judgment committee Union of Arab Universities Award. 2016.**

Member of evaluation and judgment of Arab distinguishing researcher Award of Union of Arab Universities. 2016.

International and National Conferences attended:

1. **Saddam S. Awaisheh**, Anas A. Al-Nabulsi, Hosam J. Al-Tamimi, Razan J. Rahahleh. **2018**. Isoflavones and Phytosterols Enriched Milk Mitigates Body Weight Gain and Hypercholesterolemia, And Modulate Steroids And Thyroids Hormones In Sprague-Dawley Rats. November 28-30, 2018. Inter. Confer. On Food, Nutrition, and Dietetics: Gastronomy Research, Alanya, Turkey.
2. **Awaisheh, S. S.**, Khalifeh, M. S. and Rahahleh, R. J. **2017**. Surveys the incidence and level of legal and banned antibiotics groups in local and imported poultry meat consumed in Jordan. International Conference on Building Human and Animal Health Capacities “Transformation through Improving Livelihoods” Faculty of Veterinary Med., Jordan Univ. Sci. & Tech, Irbid, Jordan. October 17-19, 2017
3. **Saddam S. Awaisheh**. **2015**. Efficacy of Qysoom and Cinnamon EOs alone or in combination in retarding oxidation in frozen beef burger model. 14-17, November, 2015. International Food Chemistry and Nanotechnology Conference. San Francisco, CA, USA.
4. **Saddam S. Awaisheh**, Saeed A. Hayek, Rabin Gyawali, Aboghasem Shahbazi, Salam A. Ibrahim. **2014**. [Using sweet potatoes to develop a medium for the cultivation of Lactobacillus spp](#). The 247th American Chemical Society (ACS) National Meeting and Exposition. March 16-20, 2014, **Dallas, Texas. USA**.
5. **Saddam S. Awaisheh**. **2013**. Inactivation of *E. coli* O157:H7 on Rocket Leaves by Eucalyptus and Wild-thyme Essential Oils. National Conference on Advances in Environmental Sciences and Technology. North Carolina A & T State University. **Greensboro, North Carolina. USA**.
6. **Saddam S. Awaisheh**. **2012**. Hypocholesterolemic effect of Symbiotic of probiotics and phytosterols on serum and hepatic lipid profile and thyroid hormones modulation of hypercholesterolemic rats. The Seventh Scientific Agricultural Conference (SSAC-2012). Jordan University of Science & Technology. **Jordan, Irbid**.
7. **Saddam S. Awaisheh**, Salam A. Ibrahim. Incidence and level of *Listeria monocytogenes* and other *Listeria* spp. in ready to eat meat products in Jordan. 2010. The 237th American Chemical Society (ACS) National Meeting & Exposition. **New Orleans, LA. USA**.

8. **Saddam S. Awaisheh**, Salam A. Ibrahim, A. Shahbazi. **2008**. Screening of antibacterial activity of lactic acid bacteria against different foodborne pathogens in popular vacuum packaged meat products in Jordan. The 235th American Chemical Society (ACS) National Meeting & Exposition. **New Orleans, LA. USA.**
9. **Saddam S. Awaisheh**. **2007**. Development of functional white soft cheese with using probiotic bacteria and goat milk. IFT meeting. **San Francisco, Florida. USA.**
10. **Saddam S. Awaisheh**, Malik S. Haddadin, Richard K. Robinson . **2006**. Incorporation of probiotic bacteria and nutraceuticals into dairy products. IFT meeting. **Orlando, FL. USA.**
11. **Saddam S. Awaisheh**, S. A. Ibrahim, A. Shahbazi. **2006**. Effect of thyme on the viability of probiotics, and overall acceptability of probiotic soft white cheese. The 233rd American Chemical Society (ACS) National Meeting & Exposition. **Chicago, IL. USA.**

Special Training Courses (Given):

1. Training course: “Principles and Applications of GMP and GHP in FSMS and Food Quality Control”. For graduates of Food Technology graduates. **Agricultural Engineers Association. 22+23/3/2019.**
2. Training course: “ Food Safety Management systems (FSMS) and Quality Control in Food Processing”. For graduates of food and nutrition graduates. **Agricultural Engineers Association. 19+20/10/2018.**
3. Training course: “Food security- planning and strategies” for Palestinians studies and strategic planning officers in ministry of agriculture sponsored by **JICA-Japan/ Palestine support Program. Jan, 2014. NCARE. Amman- Jordan.**
4. Training course in “Recent advances in processing and safety of food products Good Manufacturing Practices” for Iraqis Food Processing and Safety officers in public and private sectors. **Sponsored by FAO/ Iraq Food Program. April, 8- 14, 2013. NCARE. Amman- Jordan.**
5. Training course in “Functional Foods and Importance in Human Health”. For graduates of food and nutrition graduates. **Agricultural Engineers Association. 19/3/2013.**
6. Training course in "Dairy Products Processing: Updates and Technologies" for Iraqis Food Processing and Safety Inspectors in public and private sectors. **Sponsored by FAO/ Iraq Food Program. 22-23/1/ 2012. NCARE. Amman- Jordan.**
7. Training course in “Recent advances in Food Analysis Technology”. For graduates of food and nutrition graduates. **Agricultural Engineers Association. 5/9/2012.**
8. Training course in “Diet Therapy and Meals Planning”. For graduates of food and nutrition graduates. **Agricultural Engineers Association. 5-7/6/2012.**
9. Training course in “Revaluations in New Food Technologies”. For graduates of food and nutrition graduates. **Agricultural Engineers Association. 6/8/2011.**

- 10.** Training course in "Food safety and Hygiene in food processing plants: Principles and Applications" for Iraqis Food Processing and Safety Inspectors in public sectors sponsored by **FAO/ Iraq Food Program. 24-30/4/2011. NCARE. Amman- Jordan.**
- 11.** Training course in "Nutrition and Nutritional Assessment". For graduates of food and nutrition graduates. **Agricultural Engineers Association. 4-7/1/2011.**
- 12.** Training course in "Sources of food contamination and spoilage factors during food handling". For **Jordan Food & Drug Administration (JFDA) health inspectors. July, 2009.**
- 13.** Training course in "Principles and requirements of food safety and hygiene in food services establishment in Karak_ Jordan". **For health inspectors in Karak. April, 2009.**
- 14.** Training courses in "Food microbiology and Safety analysis: principles and techniques of classical and advanced methods". **Staff of microbiology division in Aqaba International Labs. (Ben Hayyan), Aqaba Special Economic Zone Authority (ASEZA). 2008-2009.**

Funded Research Projects:

1. Microbiological and Chemical Safety and Quality of Ready-To-Eat (RTE) meat products consumed in Jordan. **120,000 \$.** (SRIFS, Ministry of High Education, Jordan)
2. Incidence and contamination levels of carcinogenic mycotoxins in food products commonly consumed in Jordan. **25,000 \$.** (Al-Balqa' Applied University. 2019).
3. Survey and Risk Assessment of Growth Hormones in Red Meats in Jordan. **7,000 \$.** (Al-Balqa' Applied University. 2018).
4. Anticancer, anti-inflammatory and antimicrobial activities of some probiotics and plant EOs phytosomes combinations. **7,000 \$.** (Al-Balqa' Applied University. 2016).

5. Survey of aflatoxins residues in infants and child milk and cereal based formula traded in Jordan. **22,000 \$.** **(Shoman Funding for Scientific Research, 2014)**
6. Survey the incidence and level of antibiotic residues in different poultry meat products in Jordan. **22,000 \$.** **(Shoman Funding for Scientific Research, 2013)**
7. Development of functional dairy product for health improvement by using Phytosterols. **6,000 \$.** **(Joint project Faculty for Factory (FFF) Program and Danish Dairy Company, 2013).**
8. Development of functional bakery products fortified by Calcium and Vitamin D for prevention and treatment of osteoporosis in Jordan. **6000 \$.** **(Al-Sofara Bakery Company, 2011).**
9. Development of Functional dairy product for health improvement by using essential oils of medicinal herbs in Jordan to replace chemical additives in Labaneh. **6000 \$.** **(Joint project FFF Program and Al-Hammoury Dairy Factory, 2012).**
10. Anticancer activity of probiotic bacteria and plant essential oils against different colorectal cancers, breast cancer, and Leukemia. **22000 \$.** **(Shoman Funding for Scientific Research, 2011)**
11. Development of cholesterol lowering bread by using phytosterols. **6000 \$.** **(Joint project FFF Program and Al-Sofara Bakery Company, 2011).**
12. Cholesterol lowering effects of probiotic bacteria, isoflavones, and phytosterols, alone and in combination on hypercholesterolemic SD rats. **12000 \$.** **(Mu'tah University, 2008)**
13. Survey *Listeria monocytogenes* in different RTE products consumed in Jordan. **8500 \$.** **(Mu'tah University, 2007)**
14. Development of Functional and healthy probiotic cheese. **6500 \$.** **(Mu'tah University, 2006).**
15. Development of Functional and healthy probiotic Yoghurt. **5000 \$.** **(University of Jordan, 2003).**

مقالات علمية في صحف ومجلات محلية

1. أ.د. صدام العوايشة. الماء ضرورة الحياة. جريدة الرأي. 2016.
2. د. صدام العوايشة. هشاشة العظام- القاتل الصامت: المضاعفات و الوقاية والعلاج. جريدة الرأي. 2015.
3. د. صدام العوايشة. متبقات المضادات الحيوية في الأغذية: هموم الرقابة وجدل المستقبل. جريدة الرأي. 2013.
4. د. صدام العوايشة. الاغذية الوظيفية وأمراض القلب: علاج ووقاية. جريدة الرأي. 2012.
5. د. صدام العوايشة. مختبرات العقبة الدولية- فحوصات الكشف عن الميلايين في الاغذية. مجلة الدليل الى سلامة الغذاء. مؤسسة الغذاء والدواء الاردنية. 2009.

Academic Experience:

Teaching Experience:

Food Processing I: (BSc level, Course and Lab): The course includes the main food processing and preservation operations and their effects on the nutritional and sensorial characteristics of foods. Such as: blanching, pasteurization, sterilization, evaporation, dehydration, extrusion, refrigeration, freezing, microwave, irradiation, freeze drying, freeze concentration... etc

Food Processing II: (BSc level, Course and Lab): The course includes the different food products, their processing, raw material, and their significance as food products. Such as: fat and oil products, confectioneries and sugar based products, baby formulas, food additives, sensory evaluation, food packaging and packaging materials, and food fermentations

Food Chemistry: (BSc & MSc levels, Course): Food components, Classification, chemical reactions, structure, occurrence and functional properties of water, protein, carbohydrates, and lipids. Explaining different enzymatic and non-enzymatic browning reactions including factors affecting reactions and its significance in food industry. Advanced study of food vitamins, minerals, enzymes, flavors, colors, texture and additives. Specify and explain changes due to preservation and processing.

Food Analysis (BSc & MSc levels, Course & Lab): The course will cover the classical principles of analytical procedures and techniques commonly used to provide information about the chemical composition, structure of food materials. The aim of the laboratory is to give students experience in performing classical food

analysis experiments, such as Soxhlet and Kjeldahl methods, to analyze data and reporting their findings. Also the course will cover the roles of food analysis , sampling, recording and interpreting of results, experimental errors.

Instrumental Analysis: (BSc & MSc levels, Course & Lab): This course covers the basic principles of instrumental analytical procedures and techniques commonly used to provide information about the chemical composition, structure of food materials. Spectroscopy, atomic absorption , chromatography techniques such as paper , thin layer, GLC, and HPLC will be taught and demonstrated in this course.

Meat Science and Tech. (BSc level, Course and Lab): The course includes the important meat science and technology fundamentals. Such as: Meat sources, muscle structure and composition, animal pre-slaughtering and slaughtering practices. Meat microbiology and safety, and Meat preservation and processing including: canning, curing, smoking, sausage making...etc.

General Microbiology (BSc level, Course and Lab): The course aims to provide students with the ability to integrate the scientific knowledge on the general features of microorganisms, taxonomy, microbial nutrition and growth and culture media. Pathogenicity, immunological principals, endo and exotoxins, antibiotics, sterilization disinfection.

Food Microbiology (BSc level, Course and Lab): This course is designed to introduce students to various aspects of food microbiology, organisms associated naturally with foods and those responsible for spoilage. Conditions favoring the growth, death and survival of microorganisms in foods will also be studied; their immediate and long range effects on foods will be discussed. Issues of foodborne diseases,

food spoilage and preservation will be treated. Topics to be covered include Introduction to food microbiology; factors that affect interactions of microorganisms with foods; microorganisms important in foods: bacteria, molds, yeast, viruses, protozoa, algae - their classification and growth characteristics. Also included are food spoilage and preservation; food-borne diseases - infections and intoxications; public health and sanitation and microbiology of water.

Food safety & Hygiene: (BSc level, Course): This course introduces the concept of food hygiene and its importance. As well as it includes the sources, control, treatments, limits, and symptoms of different food borne pathogens, illnesses, toxins, viruses, molds, parasites, toxic chemicals, pesticides, growth hormones, antibiotics, and heavy metals. Hygiene requirements in food protection and in food establishments, with emphasis on design and construction and hygienic food handling are discussed as well. Application of HACCP system establishments and principles of risk assessment are explained.

Quality Control: (BSc level, Course): The course provides necessary basic information's about statistical aspects of quality control; acceptance sampling plans, control chart methods for attributes and variables; Adaptive quality control and basic reliability concepts.

Principles of Nutrition: (BSc level, Course): The course includes the basic principles of nutrition including, structure, metabolism, and functions of carbohydrates, proteins, lipids, water, minerals, and vitamins. As well as food generated human diseases, treatment and complications.

Human Nutrition: (BSc level, Course). Applied concepts of human nutrition emphasizing the elements of nutritional care process, role of the nutritionist and dietician and concept of dietary guides. Criteria of the healthful diet, dietary standards and methods of their determination under different physiological conditions. Malnutrition in the individual and community and its evaluation and management, drug-nutrient interactions, and nutrition and physical fitness.

Diet Therapy: (BSc level, Course and Lab): The course includes the role clinical nutrition and nutrition care in different clinical situations, including genetic defect diseases like lactose intolerance, PKU...etc. Nutrition care in different cancer cases like stomach, liver, kidney, GIT...etc. Study the nutrition care in AIDS, burnings, obesity and its control, and to study different diseases case studies.

Special Courses Taken during Study:

- Fundamentals of food processing (B.Sc. Level).
- Food processing and preservation (B.Sc. Level).
- Advanced Food Processing (M.Sc. & Ph.D)
- Meat Science and Tech. (B.Sc. Level)
- Advanced Meat Sci. & Tech. (M.S.c. & Ph.D.)
- Food Microbiology and Hygiene (B.Sc. Level)
- Food Chemistry (B.Sc. Level)
- Food Analysis (B.Sc. Level)
- Product Development (M.Sc. Level)
- Advanced Food Chemistry (M.Sc. Level)
- Advanced Food Hygiene (M.Sc. Level)
- Food Biotechnology (M.Sc. Level)
- Food Toxicology (Ph.D. Level)

- Food Enzymology (Ph.D. Level)
- Advanced Food Biotechnology (Ph.D. Level)
- Advanced Dairy Processing (Ph.D. Level)
- Dairy Chemistry and Physics (Ph.D. Level)

References:

1. Prof. Salam A. Ibrahim, Dept. of Food Processing and Biotechnology, North Carolina A&T State Univ., USA.
Ibrah001@nact.edu
2. Prof. Reza S. Tahergorabi, Dept. of Food Processing and Biotechnology, North Carolina A&T State Univ., USA
rtahergo@nact.edu
3. Prof. Saqer M. Herzallah, Dept. of Food Processing and Nutrition, Mu'tah University, Karak, Jordan.
Saqermay30@yahoo.com
4. Prof. Jafar M. Qudah, Dept. of Food Processing and Nutrition, Al-Balqa' Applied University, Salt, Jordan.
Qudah_jafar@yahoo.com
5. Prof. Areej M. Assaf, Dept. Molecular Pharmacology, Faculty of Pharmacy. Jordan University, Amman, Jordan.
Areej_assaf@ju.edu.jo