

Lina Elsalem

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Personal Profile

I am an Associate Professor of Pharmacology. My primary goals are to put forth a strong contribution in education and research and to participate in the pedagogical success of my institution. I have been involved in teaching pharmacology for undergraduate and postgraduate students at faculties of medical sciences. I aim to put my best efforts into helping students achieve their best academic performance by continuous learning and development of my teaching skills and capabilities. As an Associate Professor, I have involved myself in many research projects since I believe in research as a valuable tool for building knowledge and facilitating learning. My research integrates epidemiologic methods with cell based experimental model systems in the fields of cancer research, infectious diseases, and chronic diseases. Being a faculty member in a higher educational institute, I consider research in the field of teaching and education an integral element for academic success. I also find research as a mean to understand issues and increase public awareness. Accordingly, I have participated in many research programs aiming to explore and increase the Jordanian' population knowledge and awareness about health issues as well as disease' treatment and prevention measures.

Education & Qualifications

- October 2012- July 2016: Doctor of Philosophy (PhD) in Pharmacology.
 - Institute of Cancer Therapeutics (ICT), Faculty of Life Sciences at University of Bradford, UK.
 - Thesis Title: Aldehyde Dehydrogenases (ALDH) Expression in Cancer Tissues as Potential Pharmacological Targets for Therapeutic Intervention.
- September 2011- September 2012: Master of Science (MSc) in Cancer Pharmacology (Dist).
 - ICT, Faculty of Life Sciences at University of Bradford, UK.
 - Dissertation Title: Investigation of The Potential in Using Epigenetic Drugs to Sensitize Cancer Cells to Subsequent Treatment with Taxanes.
 - Rating: Distinction.
- October 2003 – June 2008: Bachelor of Dental Medicine and Surgery BDS (Hons).
 - Jordan University of Science and Technology (JUST), Irbid, Jordan.
 - Rating: Excellent.
 - Rank on 2008 class: The seventh.

Employment and Experience

- September 2021- present: Associate Professor, Department of Pharmacology, Faculty of Medicine, JUST, Irbid, Jordan.
- September 2021- present: Chair, Department of Pharmacology, Faculty of Medicine, JUST, Irbid, Jordan.
- September 2019- present: Assistant Dean for Basic Medical Sciences, Faculty of Medicine, JUST, Irbid, Jordan.

- September 2016- September 2021: Assistant Professor, Department of Pharmacology, Faculty of Medicine, JUST, Irbid, Jordan.
- May 2009-May 2010: General Dental Practitioner, JUST, Irbid, Jordan.
- January- May 2009: General Dental Practitioner, Al-Gazo Dental Centre- Private practice, Irbid, Jordan.
- July 2008- January 2009: Internship in Ibn Sina Comprehensive Medical Centre/ Ministry of Health, Irbid, Jordan.

Administration

- September 2021- present: Associate Professor, Department of Pharmacology, Faculty of Medicine, JUST, Irbid, Jordan
- September 2019- present: Assistant Dean, Faculty of Medicine, JUST- Basic Medical Sciences for issues related to course schedule, exams schedule and programming.
- September 2017-September 2018: The representative of the Department of Pharmacology at the Faculty of Medicine Council, JUST.
- Member of several committees at the Department of Pharmacology and Faculty of Medicine, JUST, including:
 - 2020- present: Faculty Research and Scientific Committee, Faculty of Medicine/JUST.
 - 2020- present: Online teaching and assessment committee, Faculty of Medicine/JUST.
 - 2019- present: Quality Assurance Committee, Faculty of Medicine/JUST.
 - 2019- present: Faculty of Medicine Website Development Committee, Faculty of Medicine/JUST.
 - 2019- present: Academic Schedule Committee, Faculty of Medicine/JUST.
 - 2019- present: Exams Committee, Faculty of Medicine/JUST.
 - 2019- present: Exams Committee, Department of Pharmacology, Faculty of Medicine/JUST.
 - 2019-present: Member of Course Equivalency Committee, Faculty of Medicine/JUST.
 - 2019-2020: Course Objectives Committee, Faculty of Medicine/JUST.
 - 2019- present: Study Plan Committee, Faculty of Medicine/JUST.
 - 2019- present: The Accreditation Commission of Colleges of Medicine (ACCM) Committee, Faculty of Medicine/JUST.
 - 2019-2020: Faculty of Medicine Conferences/ Scientific Committee, Faculty of Medicine/JUST.
 - 2017- present: Department Research and Scientific Committee, Faculty of Medicine/JUST.

Teaching and Supervision

- September 2016- present: **Teaching of Undergraduate Courses**, Department of Pharmacology, Faculty of Medicine, JUST, Irbid, Jordan.
 - Teaching of several undergraduate courses in the field of General Pharmacology for students at faculties of Medicine, Dentistry, Nursing and Applied Medical Sciences (2nd Year): Those are general pharmacological and toxicological courses covering any pharmacological topic.
Courses include:
 - General Pharmacology for Medical Students (M251).
 - General Pharmacology for Dental Students (M351).
 - General Pharmacology for students at Faculties of Nursing and Applied Medical Sciences (M255).

- Teaching of several undergraduate **Module** courses for medical students (2nd- 3rd Years). Those are systemic based module courses with a focus on pharmacotherapy and integrated medicine, problem-based, and research-based learning. In addition to mentoring and giving lectures during those modules, I supervised several mini research projects related to Module courses.

Module courses include:

- The Musculoskeletal System (M331).
- The Digestive System (M311).
- The Urinary & Reproductive System (M352).
- The Hematopoietic-Lymphoid System (M272).
- The Peripheral Nervous System (M322).
- The Neurosciences Module (M282).
- The Endocrine Module (M321).

- September 2016- present: **Teaching of Postgraduate Courses**, Department of Pharmacology, Faculty of Medicine, JUST, Irbid, Jordan.

Teaching of several postgraduate courses for medical and nursing students (MSc degree). These courses are related to advanced pharmacological topics with focus on special topics of research ethics, drug development policies, and proper scientific conduct. Courses also aim to improve the students' presentation, writing and teaching skills.

Courses include:

- Advanced Clinical Pharmacology and Therapeutics (M751).
- Special Topics in Pharmacology (M758).
- Advanced Pharmacology (M752).

- September 2016- present: **Postgraduate Students' Supervision**

- **Principle Supervisor** for research projects of postgraduate students at Department of Pharmacology/ Faculty of Medicine/ JUST, including:
 - Association between serum level and genetic variations of xanthine oxidoreductase with the risk of bladder cancer in Jordan. (Current MSc student)
 - Association between N-acetyltransferase-2 (NAT2) polymorphism and smoking in Jordanian patients with bladder cancer. (Graduated May 2020)
 - The evaluation of the antimicrobial activity of WLBU2 polypeptide against clinical isolates of multidrug resistant pathogenic bacteria associated with wound infections. (Graduated March 2020).
- **Co-worker and Attendee** for research project of postgraduate student at Department of Periodontics/ Faculty of Dentistry/ JUST. "Clinical and biological indicators of periodontal disease in obese and non-obese bronchial asthma patients". (Graduated January 2021).
- **Internal examiner** for the research projects:
 - "Effect of vitamin D supplementation on the serum levels of branched chain amino acids in a cohort of patients with type 2 diabetes mellitus" of postgraduate student at Department of Physiology and Biochemistry/ Faculty of Medicine/ JUST. (Graduated 2021).
 - "The antinociceptive effect of nonsteroidal anti-inflammatory drugs and acetaminophen on acid- stimulated body stretching and acid- depressed feeding behaviors in rats" of postgraduate student at Department of Pharmacology/ Faculty of Medicine/ JUST. (Graduated 2016).

- **Attendee** Thesis Defence for Master students at Department of Pharmacology/ Faculty of Medicine/ JUST. Projects include:
 - Nurses' perception of medication errors in Jordanian hospitals, 2019
 - The effect of androgen treatment on the expression of cardiac neurotrophins in male rats, 2018.
 - Relationship between *pten* mutations and resistance to androgen- deprivation therapy in prostate cancer in Jordan, 2018.
 - Evaluation of swimming exercise in combination with non- steroidal anti- inflammatory drugs on inflammatory nociception in rats, 2017.
 - The relationship between type II diabetes mellitus and- chronic depression in primary care practice in Jordan, 2017.
- Arrangement and participation in the Journal Club educational meetings at departments of medical sciences/ Faculty of Medicine (JUST) involving discussion with postgraduate students about published articles, to keep abreast of new knowledge, promoting the awareness of current research findings, teaching them to critique and appraise research, and encourage them to utilize research in evidence-based practice of the specialty.

Academic Workshops

- September 2021: Designing Your Blended Online Course, JUST
- January 2021: Raising Students' Engagement in Remote Learning Environment, JUST.
- December 2018: Quality of Online Courses- Applying the Quality Matters Rubric, JUST.
- January 2018: Teaching Methods and Strategies, JUST.
- Presentation and Teaching Skills, University of Bradford.
- Writing in a Scientific Way, University of Bradford.
- Plagiarism Detection Using Turnitin Software, University of Bradford.
- How to Cite Using Endnote Software, University of Bradford.
- Effective CVs and Covering Letters, University of Bradford.

Community Services & Leadership

- Arrangement and participation in the Scientific Open Day (Drugs Abuse), Department of Pharmacology/Faculty of Medicine, April 2017. This meeting aimed to increase the awareness of local community and University students about drugs abuse, how to prevent and treat.
- Supervising the medical students in conducting social and community-directed activities, especially the students of the "International Federation of Medical Students Associations (IFMSA) program" in Jordan. Those activities and social events inside and outside the University are mainly aimed at providing health support and increase community awareness about health challenges.
- Mentor of Medical Students Alliance for Research (MSAFR) program at JUST. MSAFR aims to support medical students who have interest in research to raise research skills and provide an opportunity to be engaged in the research track from developing a burning question till publications.
- Principle investigator and supervising the medical students to explore and increase the Jordanian' population knowledge and awareness about colorectal cancer risk factors, preventive measures and screening methods.
- Co-investigator and supervising the medical students to explore and increase the Jordanian' population knowledge and awareness about nutritional deficiencies as well as the use and practices toward vitamin supplements.

- Co-investigators to explore the prevalence of women health issues such as PMS and infertility among the Jordanian females and to provide support and referral.
- Volunteer at Operation Smile Jordan (OSJ) 2006. OSJ is a private, not-for-profit, volunteer medical services organization, provides free reconstructive surgery and related healthcare to children around the world born with cleft lip and/or palate.
- Member in the evaluation committee of the Scientific Debate activity- organized by students at Faculty of Medicine, JUST.

Research

■ **Major Research Interests**

- Covid-19 pandemic and educational impact.
- The role of microbiota in cancer pathogenesis and treatment response.
- The antimicrobial effect of cationic peptides against multidrug resistant bacteria.
- Pharmacology and safety of adjunct therapy in cancer treatment and impact on patient's quality of life.
- Genetic polymorphism of drug metabolizing enzymes in cancer patients.
- Aldehyde dehydrogenases (ALDH) expression in cancer tissues and tumour microenvironment as potential pharmacological target for therapeutic intervention.
- The role of epigenetics in the regulation of the expression of drug metabolising enzymes and drug transporters in cancer tissues.
- Targeting the biological activity of CYP1A1 and CYP2W1 for cancer treatment.

■ **Research skills**

- Bacterial culture and treatment with antimicrobial compounds.
- Antibacterial activity and synergistic effects of antimicrobial peptides using microbroth dilution technique and checkerboard assay.
- Tumour cell cultures under normoxic and hypoxic conditions.
- 3D culture models to study the tumour microenvironment, drug resistance and penetration.
- MTT and Trypan blue assays to study the drug cytotoxicity and cell proliferation.
- Gene expression profile analysis using various qRT-PCR assays.
- Gene sequencing.
- Western blotting for protein expression analysis.
- Histopathology techniques including immunohistochemistry and H&E staining.
- Gene knockdown technique using siRNA.
- Gene transduction using lentiviral vectors.
- Cell invasion using collagen assay.
- Cell migration using scratch assay.
- Detection of reactive oxygen species using flow cytometry.
- Knowledge of Proteomics, Spectroscopy, HPLC, flow cytometry and ELISA techniques.
- Data analysis using SPSS.

■ **Research Funds**

- A National fund as Co-principal investigator (PI) granted from the Scientific Research and Innovation Support Fund / Ministry of Higher Education and Scientific Research for the research project "Investigating the putative effects of beta-adrenergic receptor blocking drugs on the activity of aldehyde dehydrogenase (ALDH) in a panel of lung cancer cell lines", (MPH/1/55/2019) (amount= 58,000 \$), in collaboration with a principle investigator from Al-Zaytoonah University.

- One local fund from the Deanship of Research/JUST as principal investigator (PI) to support establishing a cell culture lab for research and to conduct a study (39,000\$).
- One local fund from the Deanship of Research/JUST as principal investigator (PI) to study the effects of hypertensive medications on serum inflammatory mediators and oxidative stress biomarkers (4,000\$).
- Three local Funds from the Deanship of Research/JUST as principal investigator (PI) to support Master students (~10,000\$ for each of them).
- Multiple local funds from the Deanship of Research/JUST as Co-PI with other investigators from JUST.
- Co- PI and multiple local funds in collaboration with other investigators from other Jordanian Universities including University of Jordan, Zarqa University and Al-Zaytoonah University.
- Participated as a speaker or poster presenter in four international conferences fully funded by JUST.

■ Research Projects Collaborations

- Projects collaboration with members from the Faculties of Medicine and Dentistry at JUST and University of Otago, New Zealand, to assess the educational impact of Covid-19 pandemic among undergraduates of medical sciences.
- Projects collaboration with members from Department of Physiology and Biochemistry/Faculty of Medicine, JUST to investigate the genetic polymorphism of certain enzymes and hormones among diabetic patients.
- Projects collaboration with members from the Institute of Cancer Therapeutics at University of Bradford/ UK. This includes identification and validation of specific drug metabolizing enzymes in cancer using 2D and 3D culture models and the use of inhibitors at different oxygen levels.
- Projects collaboration with members from the Institute of Cancer Therapeutics at University of Bradford/ UK and Faculty of Pharmacy/ Zarqa University/ Jordan. This includes evaluation of the expression and role of specific enzyme involved in cancer cell metabolic reprogramming as potential target in head and neck cancer.
- Projects collaboration with members from Al-Zaytoonah University to investigate the putative effects of beta- blockers on the activity of aldehyde dehydrogenase (ALDH) in a panel of lung cancer cell lines".

Publications, Conferences & Editorial Activities

■ Researcher Profiles and Professional Identifiers

- JUST professional page:
<https://www.just.edu.jo/eportfolio/Pages/Default.aspx?email=lmelsalem>
- Google Scholar: Lina Elsalem
<https://scholar.google.com/citations?user=S5rwGv4AAAAJ&hl=en>
- ResearchGate: Lina Elsalem
https://www.researchgate.net/profile/Lina_Elsalem
- ORCID ID: Lina Elsalem
<https://orcid.org/0000-0002-3814-4865>

■ Reviewer Contribution to Editorial Processes of Scholarly Journals

- Journal of Applied Biomedicine (EISSN 1214-0287, ISSN 1214-021X).
- PLoS ONE (ISSN:1932-6203)
- Cancer Biomarkers (EISSN 1875-8592, ISSN 1574-0153).
- Environmental Science and Pollution Research (EISSN 1614-7499, ISSN 0944-1344).

- Current Psychology (EISSN 1936-4733, ISSN 1046-1310).
- Advances in Medical Education and Practice

■ Publications in International and Indexed Journals

- Bader Ikbaryeh, Rola Al Habashneh, Basheer Khassawneh, Mohammad Alrawashdeh, **Lina Elsalem**, Jowan Al-Nusair. Clinical and biological indicators of periodontal disease in obese and non-obese adults with and without bronchial asthma. *Journal of Asthma*, 2021, 1-9.
- Khalid Kheirallah, Sarah Bloukh, Wasim Khasawneh, Jomana Alsulaiman, Adi Khassawneh, Abdel-Hameed Al-Mistarehi, Mohammad Alqudah, **Lina Elsalem**, Samir Al Bashir, Hasan H Awad, Tariq Al-Shatanawi, Tareq Saleh. Medical students' relative immunity, or lack thereof, against COVID-19 emotional distress and psychological challenges; a descriptive study from Jordan, *F1000Research* 2021.
- Mukhallad A. Mohammad, Mahmoud A. Alfaqih, Mariam Khanfar, Zouhair O Amarin, **Lina Elsalem**, Rami Saadeh, Faheem Al-Mughales. Leptin and the GA genotype of rs2167270 of *LEP* gene increase the risk of prediabetes, *Biomedical Reports* 2021, 14 (5), 1-8.
- Haneen A. Basheer, **Lina Elsalem**, Deema Jaber, Shorouk M. Ibraheem, Hamza Alhamad, Ahmad A Jum'ah. Knowledge, awareness and practices about dietary supplements in Jordan, *Tropical Journal of Pharmaceutical Research* 2021, 20 (3).
- **Lina Elsalem (Corresponding)**, Nosayba Al-Azzam, Ahmad A Jum'ah, Nail Obeidat. Remote E-Exams during Covid-19 Pandemic: A Cross-sectional Study of Students' Preferences and Academic Dishonesty in Faculties of Medical Sciences, *Annals of Medicine and Surgery* 2021, 62, p (326-333), <https://doi.org/10.1016/j.amsu.2021.01.054>
- **Lina Elsalem (Corresponding)**, Suhaila Al Sheboul, Ayat Khasawneh. Synergism between WLBU2 peptide and antibiotics against methicillin-resistant *Staphylococcus aureus* and extended-spectrum beta-lactamase-producing *Enterobacter cloacae*, *Journal of Applied Biomedicine* 2021, 19, p (1-12), <http://doi.org/10.32725/jab.2021.001>
- Nosayba Al-Azzam, Sayer Al-Azzam, **Lina Elsalem**, Reema Karasneh. Hypertension prevalence and associated factors among patients with diabetes: A retrospective cross-sectional study from Jordan, *Annals of Medicine and Surgery* 2021, 61, p (126-131), <https://doi.org/10.1016/j.amsu.2020.12.038>
- **Lina Elsalem (Corresponding)**, Ayat Khasawneh, Suhaila Al Sheboul. WLBU2 antimicrobial peptide as a potential therapeutic for treatment of resistant bacterial infections, *Turkish Journal of Pharmaceutical Sciences* 2020, DOI: 10.4274/tjps.galenos.2020.43078, (Accepted).
- Nosayba Al-Azzam, **Lina Elsalem**, Farai Gombedza. A cross-sectional study to determine factors affecting dental and medical students' preference for virtual learning during the COVID-19 outbreak, *Heliyon* 2020, 6 (12), e05704, <https://doi.org/10.1016/j.heliyon.2020.e05704>
- Ahmad A Jum'ah, **Lina Elsalem**, Carolina Loch, Donald Schwass, Paul A Brunton. Perception of health and educational risks amongst dental students and educators in the era of COVID-19, *European Journal of Dental Education* 2020, 00, p (1-10), <https://doi.org/10.1111/eje.12626>

- **Lina Elsalem (Corresponding)**, Nosayba Al-Azzam, Ahmad A Jum'ah, Nail Obeidat, Amer Mahmoud Sindiani, Khalid A Kheirallah. Stress and behavioral changes with remote E-exams during the Covid-19 pandemic: A cross-sectional study among undergraduates of medical sciences, *Annals of Medicine and Surgery* **2020**, 60, p (271-279), <https://doi.org/10.1016/j.amsu.2020.10.058>
- **Lina Elsalem (Corresponding)**, Haneen A Basheer, Ayat Alshoh, Abdullah Abu-Aqoulah, Hussein Alsa'di, Sara Bayyari, Faris Abu Za'nouneh. Study of Adverse Effect Profile of Zoledronic Acid Infusion Among Patients with Cancer: A Retrospective Analysis, *International Journal of Cancer Management* **2020**, 13(10):e106132, <https://doi.org/10.5812/ijcm.106132>
- Amer Mahmoud Sindiani, Nail Obeidat, Eman Alshdaifat, **Lina Elsalem**, Mustafa M Alwani, Hasan Rawashdeh, Ahmad S Fares, Tamara Alalawne, Loai Issa Tawalbeh. Distance education during the COVID-19 outbreak: A cross-sectional study among medical students in North of Jordan, *Annals of Medicine and Surgery* **2020**, 59, p (186-194), <https://doi.org/10.1016/j.amsu.2020.09.036>
- Nosayba Al-Azzam, **Lina Elsalem**. Leukotriene D₄ role in allergic asthma pathogenesis from cellular and therapeutic perspectives, *Life Sciences* **2020**, 260, 118452, <https://doi.org/10.1016/j.lfs.2020.118452>
- Carolina Loch, Ian BJ Kuan, **Lina Elsalem**, Donald Schwass, Paul A Brunton, Ahmad Jum'ah. COVID- 19 and dental clinical practice: Students and clinical staff perceptions of health risks and educational impact, *Journal of dental education* **2021**, 58, p (44– 52), <https://doi.org/10.1002/jdd.12402> (Available online 2020).
- **Lina Elsalem (Corresponding)**, Ahmad A Jum'ah, Mahmoud A Alfaqih, Osama Aloudat. The Bacterial Microbiota of Gastrointestinal Cancers: Role in Cancer Pathogenesis and Therapeutic Perspectives, *Clinical and Experimental Gastroenterology* **2020**, 13, p (151-185), <https://doi.org/10.2147/CEG.S243337>
- Victoria Vinader, Maria Sadiq, Mark Sutherland, Mengying Huang, Paul M Loadman, **Lina Elsalem**, Steven D Shnyder, Hongjuan Cui, Kamyar Afarinkia, Mark Searcey, Laurence H Patterson, Klaus Pors. Probing cytochrome P450-mediated activation with a truncated azinomycin analogue. *Journal of Medicinal Chemistry Communications* **2015**, 6 (1), p (187-191), <https://doi.org/10.1039/C4MD00411F>
- Helen M Sheldrake, Sandra Travica, Inger Johansson, Paul M Loadman, Mark Sutherland, **Lina Elsalem**, Nicola Illingworth, Alexander J Cresswell, Tristan Reuillon, Steven D Shnyder, Souren Mkrtchian, Mark Searcey, Magnus Ingelman-Sundberg, Laurence H Patterson, Klaus Pors. Re-engineering of the Duocarmycin Structural Architecture Enables Bioprecursor Development Targeting CYP1A1 and CYP2W1 for Biological Activity. *Journal of Medicinal Chemistry* **2013**, 56 (15), p (6273–6277), <https://doi.org/10.1021/jm4000209>

■ Submitted Manuscripts

- **Lina Elsalem**, Mahmoud A. Alfaqih, Othman Al-Shboul, Maha Rabayaa, Saja Haifawi, Mariam Khanfar. The Synthetic Androgen, R1881, Activates Rho Kinase II in Rat Gastric Smooth Muscle Cells.
- Deema Jaber, Haneen Basheer, **Lina Elsalem**, Jehan Hamadneh, Rawan Ghazwi, Maysa Khadra, Abla Albsoul-Younes, Rami Abduljabbar, Mohammad Dweib. Prevalence and Associated Predictive Factors of Infertility-Related Stress among infertile Couples: A Cross-Sectional Study from Jordan and West Bank.

- Rami A Saadeh, Duaa Jumaa, **Lina Elsalem**, Anwar Batieha, Yousef Khader, Hashem Jaddou, Mohammed El-Khateeb, Kamel Ajlouni. Osteoporosis Among Postmenopausal Jordanian Women and Nutritional Factors.

■ Abstracts and Proceedings

- Conference paper ‘Oral presentation’: The 2nd International Conference on Antimicrobial and Antibacterial Agents 2019, 'Title' Synergistic effects of antimicrobial peptide WLBU2 combined with antibiotics against multidrug-resistant bacteria associated with wound infections, *Journal of Clinical Infectious Diseases & Practice* (2019) Volume 4, P29.
- Conference paper ‘Oral presentation’: The 32nd Euro Congress on Cancer Science & Therapy 2019, ‘Title’ Aldehyde dehydrogenase 7A1 (ALDH7A1) contributes to reduction of reactive oxygen species generation in colorectal tumour microenvironment, *Journal of Cancer Science & Therapy* (2019), Volume 11, P54
- Conference paper ‘poster’: The 25th Biennial Congress of The European Association for Cancer Research 2018, ‘Title’ PO-273 Aldehyde dehydrogenase 7A1 (ALDH7A1) contributes to reduction of reactive oxygen species generation in colorectal tumour microenvironment, *ESMO Open* (2018), 3(Suppl 2): A334.1-A334
- Conference paper ‘poster’: The National Cancer Research Institute Conference 2017, ‘Title’ Human aldehyde dehydrogenase 7A1 (ALDH7A1) expression affects cancer cell proliferation, migration and cell protection against oxidative stress.
- Conference paper ‘poster’: The 9th Scientific Conference of The Faculty of Medicine (JUST) 2017, ‘Title’ Human aldehyde dehydrogenase 7A1 (ALDH7A1) expression affects cancer cell proliferation, migration and cell protection against oxidative stress.
- Conference paper ‘poster’: The 24th Biennial Congress of The European Association for Cancer Research 2016, ‘Title’ Human aldehyde dehydrogenase 7A1 (ALDH7A1) expression affects cancer cell proliferation, migration and cell protection against oxidative stress, *European Journal of Cancer* (2016), Vol. 61, S103.
- Conference paper ‘poster’: The EACR-AACR-SIC Special Conference 2015, ‘Title’ 188 Hypoxia modulates the expression of aldehyde dehydrogenases in colon cancer cells with ALDH7A1 emerging as a key enzyme whose functional involvement is dependent on the tumour microenvironment, *EAS* (2015) | Proceedings Book P71.
- Conference paper ‘oral presentation’: Postgraduate Research Mini Conference 2015, Faculty of life Sciences, University of Bradford, ‘Title’ Exploration of the role of ALDH in colon cancer progression and influence on chemotherapy.
- Conference paper ‘poster’: The 10th National Cancer Research Institute Conference 2014, ‘Title’ The impact of hypoxia on the expression of aldehyde dehydrogenases in colon cancer.
- Conference paper ‘poster’: Research and Development Open Day 2014, University of Bradford, ‘Title’ The impact of hypoxia on the expression of aldehyde dehydrogenases in colon cancer.
- Conference paper ‘oral presentation’: Postgraduate Research Mini Conference 2014, Faculty of life Sciences, University of Bradford, ‘Title’ The impact of hypoxia on the expression of aldehyde dehydrogenases in colon cancer.
- Conference paper ‘poster’: YCR Annual Scientific Meeting 2013, ‘Title’ Re-engineering of the Duocarmycin Structural Architecture Enables Tumour-Selective CYP2W1-mediated Drug Activation in Human Colon Cancer Xenografts.

- Conference paper ‘poster’: Research and Development Open Day 2013, University of Bradford, ‘Title’ Modulation of drug metabolising enzymes and ABC drug transporters with decitabine has no bearing on the chemosensitivity of paclitaxel.

■ Conferences, Symposiums and Scientific Meetings

- 17 February 2021: COVID-19: New Approaches to Prevention & Treatment For Allergy & Asthma Patients (webinar).
- 28 January 2021: Joint British Society for Immunology- National Cancer Research Institute (BSI-NCRI) webinar: What do cancer T cells see?
- 11-12 November 2019: **Invited Speaker** at the 2nd International Conference on Antimicrobial and Antibacterial Agents, Istanbul, Turkey
- 7-8 March 2019: **Invited Speaker** at The 32nd Euro Congress on Cancer Science & Therapy, Barcelona, Spain.
- 30-June---3 July 2018: Poster presentation at the EACR25 conference, Amsterdam, Netherland
- 5-8 November 2017: Poster presentation at the NCRI conference, Liverpool, UK
- 18-19 October 2017: Poster presentation at the 9th Faculty of Medicine Conference/ JUST, Irbid, Jordan
- 9-12 July 2016: Poster presentation at The 24th Biennial Congress of The European Association for Cancer Research, Manchester, UK
- 20-23 June 2015: Poster presentation at The EACR-AACR-SIC Special Conference, Florence, Italy
- 2nd April 2015: Oral presentation at the Postgraduate Research Mini conference, Faculty of life Sciences, University of Bradford, UK
- 2-5 November 2014: Poster presentation at the 10th NCRI conference, Liverpool, UK
- 25th June 2014: YCR Annual scientific meeting, Harrogate, UK
- 2014: Poster presentation at the Research and Development Open Day, Faculty of life Sciences, University of Bradford, UK
- April 2014: Oral presentation at Postgraduate Research Mini conference 2014, Faculty of life Sciences, University of Bradford, UK
- 26th June 2013: Poster presentation at YCR Annual scientific meeting, Harrogate, UK
- 20th March 2013: Poster presentation at Research and Development Open Day, Faculty of life Sciences, University of Bradford, UK
- 7th-10th May 2008: First International Scientific Conference of Faculty of Dentistry/ JUST and 5th annual scientific Meeting of IADR-JOR

Professional Memberships

- Member in the British Association for Cancer Research (BACR).
- Member in the European Association of Cancer Research (EACR).
- Member at the Jordanian Dental Association (JDA).

Awards and Scholarship

- April 2015: BACR/CRUK Student Awards, The EACR-AACR-SIC Special Conference 2015.
- 2013: PrimerDesign biotechnology company student sponsorship for merit PhD research project.
- 2012-2016: Full Graduate Scholarship funded by JUST University/ Faculty of medicine to obtain PhD degree at University of Bradford, UK.
- 2011-2012: Full Graduate Scholarship funded by JUST University/ Faculty of medicine to obtain MSc degree at University of Bradford, UK.