

Curriculum Vitae

Sanaa K. Bardaweel

BSc, MSc, PhD Pharmacy

Assistant Professor of Medicinal Chemistry

Department of Pharmaceutical Sciences

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GENERAL INFORMATION

Date of Birth : April 22^{ed}, 1981

Place of Birth : Jarash - Jordan.

Nationality : Jordanian

Marital Status : Married, with three Children

EDUCATION

- Bachelor of Science in Pharmacy (1999 – 2004) , **Excellence**

University of Jordan

Amman, Jordan

- Master of Science in Pharmaceutical Sciences (2004-2006), **Excellence**

Thesis Title, [*In vitro* evaluation and cytocompatibility of natural polymers for local/systemic delivery of macromolecules](#)

Advisor: Professor Aiedeh, Khalid

University of Jordan

Amman, Jordan

- Doctor of Philosophy in Medicinal Chemistry (2006-2010)

Thesis Title, [Defining the Catalytic and Kinetic Mechanism and Natural Function of the Highly Conserved Acyl-AMP Hydrolase, HINT1](#)

Advisor: Professor Carston R. Wagner

University of Minnesota

Minneapolis, USA

LANGUAGES

- Arabic Mother Tongue
- English Excellent
- Greek Very good
- French Good
- Russian Fair

POSITIONS AND ACADEMIC APPOINTMENTS

- 2011-present, *Assistant Professor, JU*, The University of Jordan, Faculty of Pharmacy, Amman
- 2008-2010, *Radiation Protection Safety Officer, UM*, University of Minnesota, Minneapolis, MN
- 2007-2010, *Research Assistant, UM*, Medicinal Chemistry Department, University of Minnesota, Minneapolis, MN
- 2004-006, *Instructor, teaching Assistant, JU*, The University of Jordan, , Faculty of Pharmacy, Amman

HONORS AND AWARDS

- 2006 The University of Jordan Honor Award, Graduates.
- 2010 The University of Minnesota Excellence Award for Graduate Students.

PROFESSIONAL ORGANIZATION MEMBERSHIP

- American Chemical Society
- American Association of Pharmaceutical Scientists
- The Jordanian Pharmaceutical Association

PROFESSIONAL QUALIFICATION

- Multidisciplinary background in molecular biology techniques: Expertise in DNA cloning, DNA mutagenesis, protein characterization, enzymatic assay, in vitro cell based assays.
- Proficient in modern analytical techniques: HPLC, Size Exclusion Chromatography, Western Blot, PCR, NMR, Mass Spectrometry.
- Experience in multistep synthesis, purification and characterization of organic compounds.
- Familiar with professional computational softwares: ChemDraw, SciFinder, PyMOL, etc.
- Accomplished the cloning, site-directed mutagenesis, over-expression, refolding and purification of multiple proteins.
- Developed a method to study two proteins interaction via radiolabeling assays.
- Developed a method to study the bacterial phenotype associated with the “Y” genes; genes with unknown functions.
- Experience in Tissue and Cell culture techniques, mainly animal cell culture.

TEACHING EXPERIENCE AT THE UNIVERSITY OF JORDAN

- Medicinal chemistry I (Undergraduate level)
- Medicinal chemistry II (Undergraduate level)
- Medicinal chemistry III (Undergraduate level)
- Instrumental analysis (Undergraduate level)

- Phyto-chemical Analysis (Undergraduate level)
- Seminar in pharmaceutical Sciences (Undergraduate level)
- Phyto-chemical Analysis-Practical (Undergraduate level)
- Medicinal chemistry- Practical (Undergraduate level)
- Instrumental analysis- Practical (Undergraduate level)
- Analytical Chemistry – Practical (Undergraduate level)
- Phytochemistry– Practical (Undergraduate level)
- Organic Chemistry – Practical (Undergraduate level)

NATIONWIDE ACTIVITIES AND CONSULTATION

Associate Editor of:

- UK Journal of Pharmaceutical and Biosciences (UKJPB)
- Journal of Innovations in Pharmaceuticals and Biological Sciences

Referee for the International Journals of

- BMC Complementary and Alternative Medicine
- African Journal of Pharmacy and Pharmacology
- The Jordan Journal Pharmaceutical Sciences
- Journal of Women's Health, Issues & Care
- Natural products research.
- *Acta Pharmaceutica*.
- Advances in Biochemistry
- European Journal of Molecular Biology
- International Journal of Advances in Pharmacy, Biology and Chemistry
- Arch der pharmazie
- Journal of medicine and medical research
- The European Journal of Contraception and Reproductive Health Care
- African Journal of Traditional, Complementary and Alternative Medicines
- International Journal of Nanomedicine

MASTER STUDENT SUPERVISION

- Chemical composition of the volatile oil from leaves of four cultivars of Jordanian *Oleo europaea* L. and evaluation of antioxidant and anticancer activities of the aqueous extract. MSC Graduation Thesis. Faculty of Pharmacy, University of Jordan. June 2014(Co-Supervisor).
- Metformin: determinants of its beneficial role in ER-positive breast carcinoma growth inhibition. MSC Graduation Thesis. Faculty of Pharmacy, University of Jordan. December 2014 (Supervisor).

MEMBERSHIP IN GRADUATE EXAMINATION COMMITTEES

- MSC thesis: Hamsa Alakad. "Investigating physicians' perception of pharmaceutical trade names in Jordan's private market: simulated and real-world setting approaches". MSC Graduation Thesis. Faculty of Pharmacy, University of Jordan. May 2014.
- MSC thesis: Hanan S.Alamaddin." The use of comparative intramolecular contact analysis to build valid pharmacophore model(s) against soluble epoxide hydrolase towards development of potential anti-inflammatory agents." ". MSC Graduation Thesis. Faculty of Pharmacy, University of Jordan. July 2013.
- MSC thesis: Rasha Khalil Zamel. "The effect of membrane receptors on cellular behavior of breast cancer cell lines." MSC Graduation Thesis. Faculty of Medicine, University of Jordan. December 2014.
- MSC thesis: Musab Mahmoud Sadeh. "Pharmacophore-based screening and identification of novel phosphoinositide 3-kinase (PI3Ka) inhibitors." MSC Graduation Thesis. Faculty of Pharmacy, University of Alzytoona. December 2014.

GRANTS AND FUNDED PROJECTS

- **S. Bardaweel**, M. Hudaib and K. Tawaha. *Project title: "In Vitro* Evaluation of Antibacterial, Antifungal, and Anticancer Activities of Essential Oils from Six

species of Eucalyptus". (13000 \$, Deanship of Academic research, University of Jordan-2012).

- **S. Bardaweel**, R. Abu-Dahab and R. Darwish. *Project title: " D-amino acids: investigation of possible toxicity in bacteria and cancer cells."* (37000 \$, Deanship of Academic research, University of Jordan-2011).
- **S. Bardaweel**, M. Hudaib and K. Tawaha. *Project title:" In vitro evaluation of antibacterial, antifungal, and anticancer activities of essential oils from selected aromatic medicinal plants in Jordan*(10000 \$, Deanship of Academic research, University of Jordan-2014).
- **S. Bardaweel**, Khaled Al-fawares, Yusuf Al-Hiari, Mohammad Al-Zweiri, and Mohammad Khafar. *Project title:" Purification of Pathogenesis Determinant Proteins for the Identification of Novel Antimicrobial Targets: Polyphosphate Kinase 1 Active Site Characterization".* (129000\$, Scientific Research Support Fund, The Ministry of Higher Education, Jordan-2014)

PODIUM AND POSTER PRESENTATIONS:

- Session Chair at the XIII International Conference on Pharmacy and Pharmaceutical Sciences. Dubai, 2015.
- XIII International Conference on Pharmacy and Pharmaceutical Sciences. Dubai, UAE. *Oral presentation: Antimicrobial, Antioxidant and Free Radical Scavenging Activities of Essential Oils Extracted from Six Eucalyptus Species.* 2015 (**Sanaa K. Bardaweel**, Mohammad M. Hudaib, Khaled A. Tawaha, Rasha M. Bashatwah.)
- The First International Conference on Pharmaceutical and Biological Sciences/ Abu Dhabi, UAE. *Oral presentation: D-amino Acids: Prospects for New Therapeutic Agents.* 2013 (**Sanaa Bardaweel**)
- The 3ed International Conference of the Faculty of Pharmacy/The University of Jordan 2012.

- The 15th Annual Congress of the Scientific Association of Colleges of Pharmacy In the Arab World 2012.
- Chemical Biology Initiative Seminars/ USA, Minneapolis. *Oral presentation:* Connecting Genotype & Phenotype: Discovering the Essential Role of Histidine Nucleotide Proteins on E. Coli Alanine Metabolism. 2010. (**Sanaa Bardaweel** and Cartson Wagner)
- NIH Chemistry & Biology Interface Training Grant Symposium / USA, Minneapolis. *Oral presentation:* Metabolic Phenotype Discovery of HinT Deleted Escherichia coli Strain. 2010. (**Sanaa Bardaweel**, Michael Sadowsky, and Carston R. Wagner).
- Gordon Research Conference on Enzymes and Co-enzymes / USA/Waterville Valley. *Poster:* Defining the Catalytic & Kinetic Mechanism and Natural Function of the Highly. 2009. (**Sanaa Bardaweel** and Cartson Wagner)

COMPUTER SKILLS

- Excellent command in the use of Microsoft windows and office (Word, Excel, PowerPoint, Internet, Outlook).
- Good command of statistical softwares (SPSS).
- Excellent command in EndNote.
- Excellent command in Drug discovery softwares: ChemDraw, ISIS Draw, Science Finder, and Design Graphics software (Adobe Photoshop, Adobe Illustrator).

PUBLICATIONS

1. Probing the impact of the echinT C-terminal domain on structure and catalysis (2010) **Sanaa Bardaweel**, Pace J, Chou TF, Cody V, Wagner CR. *Journal of Molecular Biology* 404 (4), 627-638.
2. *E. coli* histidine triad nucleotide binding protein 1 (ecHinT) is a catalytic regulator of D-alanine dehydrogenase (DadA) activity in vivo (2011) **Sanaa Bardaweel**, Ghosh B, Chou TF, Sadowsky MJ, Wagner CR. *PloS one* 6 (7), e20897.

3. Synthesis and Evaluation of Potential Inhibitors of Human and Escherichia coli Histidine Triad Nucleotide Binding Proteins (2012) **Sanaa Bardaweel**, Brahma Ghosh, Carston R. Wagner, *Bioorganic & Medicinal Chemistry Letters* 22 (1), 558-560.
4. Dynamic simulation of thermopneumatic micropumps for biomedical applications (2013) Hamzeh Bardaweel and **Sanaa Bardaweel**. *Microsystem technologies* 19 (12), 2017-2024.
5. Complementary and alternative medicine utilization by a sample of infertile couples in Jordan for infertility treatment: clinics-based survey (2013) **Sanaa Bardaweel** , Mayadah Shehadeh, Ghadeer ARY Suaifan and Maria-Vanessa Z Kilani, *BMC Complementary and Alternative Medicine* 13 (1), 35
6. An *in vitro* Based Investigation into the Cytotoxic Effects of D-amino Acids (2013) **Sanaa Bardaweel**, Rana Abu-Dahab, and Nour F. Almomani. *Acta Pharmaceutica* 63 (4), 467-478.
7. D-serine in Neurobiology: CNS Neurotransmission and Neuromodulation (2014) **Sanaa Bardaweel**, Muhammed Alzweiri and Aman Ishaqat. *The Canadian Journal of Neurological Sciences* 41 (2), 164-176.
8. D-amino Acids: Prospects for New Therapeutic Agents (2014) **Sanaa Bardaweel**. *Journal of Medical and Bioengineering* 3,195-198.
9. Alternative and antioxidant therapies utilization by a sample of infertile males in Jordan: a cross sectional survey (2014) **Sanaa Bardaweel**. *BMC Complementary and Alternative Medicine* 14:244.
10. Antioxidant, antimicrobial and antiproliferative activities of *Anthemis palestina* essential oil (2014) **Sanaa Bardaweel**, Khaled A. Tawaha, Mohammad M. Hudaib. *BMC Complementary and Alternative Medicine* 14:297.
11. Evaluation of antibacterial, antifungal, and anticancer activities of essential oils from six species of *Eucalyptus* (2014) **Sanaa Bardaweel**, Mohammad Hudaib, Khaled Tawaha. *Journal of Essential Oil Bearing Plants*. *In press*
12. Synergism and efficacy of some naturally occurring D-amino acids against clinically relevant bacterial and fungal species (2014) **Sanaa Bardaweel**, Rula M. Darwish, Muhammed H. Alzweiri and Yusuf M. Al-Hiari. *Jordan Journal of Pharmaceutical Sciences*. *In press*
13. The development and application of novel IR and NMR-based model for the evaluation of carminative effect of *Artemisia Judaica* L. Essential oil (2014) Muhammed Alzweiri, Ibrahim

M. Alrawashdeh, and **Sanaa K. Bardaweel**. *International Journal of Analytical Chemistry*. Volume 2014, Article ID 627038, 10 pages.

14. Antimicrobial, Antioxidant and Free Radical Scavenging Activities of Essential Oils Extracted from Six Eucalyptus Species (2015). **Sanaa K. Bardaweel**, Mohammad M. Hudaib, Khaled A. Tawaha, Rasha M. Bashatwah. *International Journal of Biological, Food, Veterinary and Agricultural Engineering*. Vol:9, 66-69.

CONTACT INFORMATION

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