

Dr. Lina A. Dahabiyeh

University of Jordan
Faculty of Pharmacy
Department of Pharmaceutical Sciences
Office No.: 327

Work Phone: + 962 65355000 (23306)
Email: l.dahabiyeh@ju.edu.jo

Education

- Ph.D. in Pharmacy, School of Pharmacy, University of Nottingham, Nottingham, UK. 2012-2016.
Thesis Title: Targeted Mass Spectrometry for Plasma Glycoprotein Profiling in Pre-eclampsia.
- M.Sc. in Pharmaceutical Sciences, Faculty of Pharmacy, University of Jordan, Amman, Jordan. 2006-2008.
Thesis Title: Discovery of New Hormone Sensitive Lipase Inhibitors via Ligand-based Pharmacophore Modeling and QSAR Analysis Followed by Experimental Validation
- B.Sc. of Pharmacy, Faculty of Pharmacy, University of Jordan, Amman, Jordan. 2000-2005.

Professional Experience

- 2020-Present: Associate Professor, Department of Pharmaceutical Sciences, School of Pharmacy, The University of Jordan.
- 2017-2020: Assistant Professor, Department of Pharmaceutical Sciences, School of Pharmacy, The University of Jordan
- 2009-2012: Lecturer, Department of Pharmaceutical Chemistry and Pharmacognosy, Faculty of Pharmacy, Applied Science University.
- 2008-2009: Teaching Assistant and Research Assistant, Department of Pharmaceutical Sciences, School of Pharmacy, The University of Jordan.
- 2005-2006: Regulatory Affairs Officer, Drug Registration Department/ USA (FDA), Hikma Pharmaceutical. Amman, Jordan

Research Interests:

- Bioanalysis and biomarker discovery
- Using advanced analytical strategies such as mass spectrometry and infrared microspectroscopy to aid the understanding of biomedical problems such as pre-eclampsia, cancer and infection diseases
- Metabolomics and proteomic studies.
- Qualitative and quantitative analysis of proteins (LC-MS/MS, ELISA and Western blotting).
- The Renin-Angiotensin System (RAS) and its involvement in hypertension.

- Computational Chemistry and bioactivity evaluation (in vivo and in vitro studies)
- Bioinformatics

Technical Skills

- Mass Spectrometry (MS) and Liquid Chromatography-Mass Spectrometry (LC-MS and LC-MS/MS techniques)
 - Targeted LC-MS/MS using triple quadrupole mass analyser
 - Untargeted Analysis
- Metabolomics and Proteomics Approaches for biomarker discovery
- IR spectroscopy and microspectroscopy
- Protein Fractionation and Extraction Techniques
 - Affinity Chromatography
 - Size exclusion chromatography
 - Ion exchange chromatography
 - Reversed phase chromatography
- Protein Separation, identification and quantification by
 - ELISA
 - Western Blot
 - 1D SDS PAGE
 - 2D SDS PAGE
- Bioinformatics and Multivariate data analysis

Teaching Experience and Postgraduate Students Supervision

- Drug Identification and Characterization (MSc. Pharmacy Students)
- Applied Chromatography Course
- Instrumental Pharmaceutical Analysis Course (Theory and Practical)
- Pharmaceutical Analytical Chemistry Course (Theory and Practical)
- Seminar in Pharmaceutical Sciences Course
- Pharmaceutical Organic Chemistry-Practical
- Phytochemical Analysis-Practical
- Medicinal Chemistry- Practical
- Main supervisor and co-supervisor for MSc. students in pharmaceutical sciences program, School of Pharmacy, The University of Jordan.

Workshops and Training Courses:

- Attended more than fifteen Academics Staff Development Workshops organized by Accreditation and Quality Assurance Centre, University of Jordan, Amman between 2017- till now including workshops related to improving research skills and academic performances.

- UV-Vis spectroscopy for validated pharmaceutical testing, SelectScience. Virtual seminar. January 28th, 2021.
- NMR-based metabolomics in breast cancer research, SelectScience. Virtual seminar. May 14th, 2020.
- Finish a Western Blot quickly with the iWestern workflow. ThermoFisher Scientific, Virtual seminar. May 19th, 2020.
- Elsevier training for “Increasing the Research Efficacy Elsevier, ScinceDirect and Scopus” 5th ICRPUB 2019 Innovation, Participating and Sustainability, Kimpinski Hotel, Amman, Jordan. October 24th, 2019.
- Plagiarism Detection by Turnitin, 5th ICRPUB 2019 Innovation, Participating and Sustainability, Kimpinski Hotel, Amman, Jordan. October 24th, 2019.
- Latest Advances in LC-MS/MS Analysis; Forensic, Clinical, Pharma & Biopharma Laboratories, Food & Environmental Laboratories InterContinental Amman, Jordan. August 27th and 28th, 2019.
- Latest applications for mass spectrometry for the analysis of BIOLOGICS, InterContinental Amman, Jordan 12 December 2018.
- Research Based Teaching Workshop, National Erasmus+ Office, Hamdi Mango Centre for Scientific Research. The University of Jordan. Jordan. 24th September 2018.
- The 8th Scientific day of Scientific Research at Hamdi Mango Center for Scientific Research. The University of Jordan. Jordan. 26th April 2018.
- HPLC instrument and practical approaches to significantly improve laboratory Sheraton Hotel, Amman, Jordan, 2nd July 2018.
- Using Advanced Mass Spectroscopy Technologies in Clinical and Forensic Applications, InterContinental Amman, Jordan 1st November 2017.
- The fourth Erasmus + national Conference. La Royal Amman, Jordan. 9th October 2017
- TAIEX Workshop on GEANT, H2020 and European Synchrotron Sources (**SESAME**), Days Inn Hotel & Suites Amman, Jordan. 12– 3 August 2017.
- Academics Staff Development Workshops (18 hours), Accreditation and Quality Assurance Centre, University of Jordan, Amman, Jordan. 23-25 January 2017.
 - Subjects of Staff Development Workshops:
 - The university of Jordan code of practice and Quality Assurance (3 hours).
 - Intended learning outcomes (3 hours).
 - Modern trends in university teaching and student centered learning (3 hours).
 - Exams preparation and learner’s assessment (3 hours).
 - Laws, bylaws and regulations of the University of Jordan (3 hours).
 - Course design (3 hours).

- Sciex SWATH™ 2.0 Workshop, Phoenix House, Warrington, UK. 12 March 2015.
- Quantitative Proteomics and Data Analysis, Queen Hotel, Chester, UK. 24 and 25 March 2014.
- Hichrom HPLC training courses, Nottingham Biocity, Nottingham, UK. 16 September 2014.
- Short courses on method development and data analysis, quantitative method validation and multivariate analysis, Centre of Analytical Biosciences, University of Nottingham, Nottingham UK. 2014-2016.
- Personal Skills for the Working Environment: A conference for PG students, Nottingham, UK. 10 January 2013.
- Staff Development Workshops, Center for Educational Development, Applied Science University, Amman, Jordan. 9 February -11 February 2010.
- USP Regional Scientific Workshop, Amman, Jordan. 10 and 11 September, 2005.
- GMP trends sessions, Hikma Pharmaceuticals, Amman, Jordan. June 2005.

Conference Contributions and International Meetings

- Virtual analytical Summit 2021. 23-24 February, 2021. Attendee.
- Women in Academia, virtual conference, 20-21 January, 2021. Jordan. Attendee
- **Lina A. Dahabiyeh.** The Emerging Role of Proteomics in Disease Biomarker Discovery: Approaches and Applications. Phi's Research and Innovation Summit July 3 – 4, 2020. Invited speaker. Oral presentation
- 17th Synchrotron-Light for Experimental Science and Applications in the Middle East (SESAME) Users' Meeting, SESAME, Allan, Jordan. November 30- December 1 2019, Attendee.
- **Lina A. Dahabiyeh.** The Promising Role of Mass Spectrometry in Targeted Protein Quantification, 7th International Symposium-Cum-Training Course on Molecular Medicine and Drug Research (MMDR-7), ICCBS, University of Karachi, Pakistan 4-7 November 2019. Invited Speaker, Oral Presentation and Session Chair.
- **Lina A. Dahabiyeh** and Randa Mansour. Infrared Microspectroscopy to Investigate the Role of Placenta in the Pathogenesis of Pre-eclampsia, 16th SESAME Users Meeting Amman, Jordan 15th – 16th December 2018, Oral Presentation
- The 5th Middle East Molecular Biology Congress and Exhibition, King Hussein bin Talal Convention Centre Dead Sea, Jordan 3-6 October 2018, Attendee.
- **Lina A. Dahabiyeh,** David Tooth, David Barrett. Quantification of Plasma Angiotensinogen Redox Forms in a Case-control Study of Pre-eclampsia using

Targeted LC-MS/MS Gordon Research Seminar (GRS) and Gordon Research Conference (GRC) Ventura, CA, USA February 17-23, 2018, Oral and Poster Presentations

- 15th Synchrotron-Light for Experimental Science and Applications in the Middle East (SESAME) Users' Meeting, GERASA hotel in Amman, Jordan 18-19 December 2017, Attendee.
- **Lina A. Dahabiyeh**, David Tooth, David Barrett. Quantification of Plasma Angiotensinogen Redox Forms in a Case-control Study of Pre-eclampsia using Targeted LC-MS/MS ICPPS 2017: 19th International Conference on Pharmacology and Pharmaceutical Sciences, Italy, April 13-14, 2017. Oral Presentation and Session Chair.
- **Lina A. Dahabiyeh**; David Tooth; David Barrett. Identification of potential plasma protein biomarkers in pre-eclampsia by label-free targeted LC-MS/MS. Pharmaceutical Sciences 17/ International Conference on Pharmaceutical Sciences. Istanbul, Turkey. March 24-25, 2017. Oral Presentation
- **Lina A. Dahabiyeh**; David Tooth; Rob Layfield; David Barrett. Identification of potential plasma protein biomarkers in pre-eclampsia by label-free targeted LC-MS/MS. The 14th East Midlands Proteomics Workshop and Exhibition, Warwick University, UK. 18 November 2015. Poster Presentation
- **Lina A. Dahabiyeh**, David Tooth, R. Layfield, Aiwu Zhou, Robin W. Carrell, Yahui Yan, Randy J. Read, and David A. Barrett Analysis of angiotensinogen redox switch involved in the pathogenesis of pre-eclampsia by targeted LC-MS/MS. 63rd ASMS Conference on Mass Spectrometry and Allied Topics, America's Center, St. Louis, Missouri, USA. May 31-June 4, 2015. Poster Presentation
- **Lina A. Dahabiyeh**; David Tooth; Rob Layfield; Aiwu Zhou; Robin Carrell; Yahui Yan; Randy Read; David Barrett. Detection of Angiotensinogen Cysteine Peptides Involved in the Redox Switch Associated with the Pathogenesis of Pre-eclampsia by High Resolution Mass Spectrometry, The 13th East Midlands Proteomics Workshop and Exhibition, Leicester University, UK. 19 November 2014. Poster Presentation
- Liquid Chromatography Mass Spectrometry Regional Meeting, Experience More Confidence in Proteomics research. University of Warwick, Coventry, UK. 11 December 2014. Attendee.
- Functional Proteomics 'from proteins to organisms' Conference, East Midlands Conference Centre, Nottingham, UK. 3 and 4 December 2013. Attendee.
- The 12th East Midlands Proteomics Workshop and Exhibition, Leicester University, UK. 6 November 2013. Attendee.
- The 11th East Midlands Proteomics Workshop, Loughborough, UK, 28 November 2012. Attendee.
- NMR Spectroscopy Group Symposium, Nottingham, UK 21 November 2012. Attendee.

Awards and Prizes

- **The 2020 L'Oréal UNESCO For Women In Science Levant Young Talents Program.**
- **Erasmus+ Program Staff Mobility for Teaching.** Debrecen University, Hungary. May 2020 Teaching post-graduate students at Faculty of Chemistry. Postponed due to the COVID-19 pandemic.
- **Daniel Turnberg Travel Fellowship**, Scheme 2019. School of Pharmacy, Queen's Belfast University, UK. 20th July-20th August 2019.
- **Erasmus+ Program Staff Mobility for Teaching.** Jagiellonian University, Poland 12-18 May 2019 teaching postgraduate students at Faculty of Chemistry.
- **Best Poster** in the 13th East Midlands Proteomics Workshop and Exhibition, Leicester, UK. 19 November 2014. **Lina Dahabiyeh**; David Tooth; Rob Layfield; Aiwu Zhou; Robin Carrell; Yahui Yan; Randy Read; David Barrett. Detection of Angiotensinogen Cysteine Peptides Involved in the Redox Switch Associated with the Pathogenesis of Pre-eclampsia by High Resolution Mass Spectrometry,
- **Second runner up.** PG poster competition, School of pharmacy, University of Nottingham, UK. 2014. **Lina Dahabiyeh**, David Tooth, David A. Barrett. Analysis of Human Plasma Angiotensinogen as a Potential Biomarker in Preeclampsia.
- **Best Research Paper in Natural Sciences for the year 2009** granted by Al-Najah National University, Nablus. Mutasem O. Taha, **Lina A. Dahabiyeh**, Yasser Bustanji, Hiba Zalloum, Suhair Saleh. Combining Ligand-Based Pharmacophore Modeling, Quantitative Structure–Activity Relationship Analysis and in Silico Screening for the Discovery of New Potent Hormone Sensitive Lipase Inhibitors.
- A scholarship from the University of Jordan to pursue my PhD study, and a scholarship from Ministry of Higher Education, Amman, Jordan 2007 to pursue my MSc study.

Papers and Publication

- **Lina A Dahabiyeh***, Nouf N Mahmoud, Mohammad A Al-Natour, Laudina Safo, Dong-Hyun Kim, Enam A Khalil, Rana Abu-Dahab Phospholipid-Gold Nanorods Induce Energy Crisis in MCF-7 Cells: Cytotoxicity Evaluation Using LC-MS-Based Metabolomics Approach. *Biomolecules*. 2021, 11(3) 364.
- Afaf H Al-Nadaf, **Lina A Dahabiyeh**, Sajidah Jawarneh, Sanaa Bardaweel, Nouf N Mahmoud. Folic Acid-Hydrophilic polymer Coated Mesoporous Silica Nanoparticles Target Doxorubicin Delivery. *Pharmaceutical Development and Technology*. 2021
- Pobitra Borah, Pran Kishore Deb, Nizar Al-Shar'I, **Lina Dahabiyeh**, et al. Perspectives on RNA vaccine candidates for COVID-19. *Frontiers in Molecular Biosciences*, 2021,8.
- Shereen M Aleidi, **Lina A Dahabiyeh**, Xinyun Gu, Mohammed Al Dubayee, Awad Alshahrani, Hicham Benabdelkamel, Muhammad Mujammami, Liang Li, Ahmad

Aljada, Anas M Abdel Rahman. Obesity Connected Metabolic Changes in Type 2 Diabetic Patients Treated With Metformin. *Frontiers in Pharmacology*, 2020, 11

- Imad I. Hamdan, Dina El-Sabawi, Rula Darwish, **Lina A. Dahabiyeh***. Preparation, characterization and antimicrobial assessment of selected ciprofloxacin molecular salts. *Acta Pharmaceutica*. Accepted September 2020.
- Safa Daoud, Shada J. Alabed and **Lina A. Dahabiyeh**. Identification of potential COVID-19 main protease inhibitors using structure-based pharmacophore approach, molecular docking and re-purposing studies. *Acta pharmaceutica*. 2020, 71.
- **Lina A. Dahabiyeh***, Randa S.H. Mansour, Shawqi S. Saleh, Gihan Kamel. Investigating the molecular structure of placenta and plasma in pre-eclampsia by infrared microspectroscopy. *Journal of Pharmaceutical and Biomedical Analysis*, 2020, 184. <https://doi.org/10.1016/j.jpba.2020.113186>
- Eman Y. Abu-rish, Ahmad Mansour, Hebah Mansour, **Lina A. Dahabiyeh**, Shereen Aleidi, and Yasser Bustanji. Pregabalin inhibits in vivo and in vitro cytokine secretion and attenuates spleen inflammation in Lipopolysaccharide/Concanavalin A -induced murine models of inflammation. *Scientific Reports*, 2020. <https://doi.org/10.1038/s41598-020-61006-1>
- **Lina A. Dahabiyeh**, David Tooth, Lesia O. Kurlak, Hiten D. Mistry, Fiona Broughton Pipkin and David A. Barrett, A pilot study of alterations in oxidized angiotensinogen and antioxidants in pre-eclamptic pregnancy, *Scientific Reports*, 2020, 10, 1956, <https://doi.org/10.1038/s41598-020-58930-7>
- Afaf H.Al-Nadaf, **Lina A. Dahabiyeh***, Sanaa Bardaweel, Nouf N.Mahmoud, Sajidah Jawarneh, Functionalized mesoporous silica nanoparticles by lactose and hydrophilic polymer as a hepatocellular carcinoma drug delivery system, *Journal of Drug Delivery Science and Technology*, 2020, 56.doi.org/10.1016/j.jddst.2020.101504
- **Lina A Dahabiyeh**, Abeer K. Malkawi, Xiaohang Wang, Dilek Colak, Ahmed H. Mujamammi, Essa M. Sabi, Liang Li, Majed Dasouki, and Anas M. Abdel Rahman. Dexamethasone-Induced Perturbations in Tissue Metabolomics Revealed by Chemical Isotope Labeling LC-MS analysis, *Metabolites*, 2020 10 (2), 1-28.
- **Lina A. Dahabiyeh***, Eman Y. Abu-rish, Mutasem O. Taha, Inhibition of Monoglyceride Lipase by Proton Pump Inhibitors: Investigation Using Docking and In Vitro Experiments, *Pharmacological Reports*, 2019 72(2), 435-442.
- **Lina A. Dahabiyeh**, David Tooth, Robin W. Carrell, Randy J. Read, Yahui Yan, Fiona Broughton Pipkin and David A. Barrett. Measurement of the Total Angiotensinogen and its Reduced and Oxidised Forms in Human Plasma Using Targeted LC-MS/MS. *Analytical and Bioanalytical Chemistry*, 2019, 411(2), 427-437 doi:10.1007/s00216-018-1455-2
- **Lina A. Dahabiyeh**, David Tooth and David A Barrett. Profiling of 54 plasma glycoproteins by label-free targeted LC-MS/MS, *Analytical Biochemistry*, 2019, 567, 72-81 DOI: 10.1016/j.ab.2018.12.011

- **Lina A. Dahabiyeh**, Yasser Bustanji, Mutasem O. Taha The Herbicide Quinclorac as a Potent Lipase Inhibitor: Discovery via Virtual Screening and in vitro/in vivo Validation. *Chemical Biology and Drug Design*, 2018, 93(5), 787-797. doi: 10.1111/cbdd.13463
- Eman Y. Abu-rish, **Lina A. Dahabiyeh**, Yasser Bustanji, Yehia S. Mohamed, Michael J. Browning. Effect of lamotrigine on in vivo and in vitro cytokine secretion in murine model of inflammation. *Journal of Neuroimmunology*, 2018, 322, 36–45
- **Lina A. Dahabiyeh***. The discovery of protein biomarkers in pre-eclampsia: the promising role of mass spectrometry. *Biomarkers*, 2018, 23(7), 609-621 doi: 10.1080/1354750X.2018.1474257
- Jumana D. Al-Shawabkeh, Afaf H. Al-Nadaf, **Lina A. Dahabiyeh**, Mutasem O. Taha. Design, synthesis and structure–activity relationship of new HSL inhibitors guided by pharmacophore models. *Medicinal Chemistry Research*, 2014, 23 (1), 127–145.
- Mutasem O. Taha, **Lina A. Dahabiyeh**, Yasser Bustanji, Hiba Zalloum, Suhair Saleh. Combining Ligand-Based Pharmacophore Modeling, Quantitative Structure–Activity Relationship Analysis and in Silico Screening for the Discovery of New Potent Hormone Sensitive Lipase Inhibitors. *Journal of Medicinal Chemistry*, 2008, 51 (20), 6478–6494.

Funded Research

- Insights into the potential anti-inflammatory and anti-proliferative effects of novel 2,4-aryl/alkyl-thieno[2,3-d] pyrimidine derivatives: An investigation using biochemical assays and mass spectrometry-based metabolites profiling. Deanship of Scientific Research, The University of Jordan. **Principal investigator**, 20000 JD, 2020-2022.
- Design, synthesis, and biological evaluation of novel monoamine oxidase-A inhibitors targeting lung cancer. King Abdullah II Fund for Development, KADDB. **Co-researcher**, 15000 JD, 2020-2022.
- Molecular evaluation of novel monoamine oxidase-A inhibitors targeting lung cancer using mass spectrometry-based metabolomics and IR-microspectroscopy. Abdul Hameed Shoman Foundation, **Co-researcher**, 20000 JD, 2020-2022.
- Insights into the molecular effects of gold nanoparticles on cancer cells using mass spectrometry-based metabolite profiling, Deanship of Scientific Research, The University of Jordan. **Principal investigator**, 20000 JD, 2019-2021.
- Investigation of metabolite profile in bacterial biofilms using mass spectrometry. Deanship of Scientific Research, The University of Jordan. **Co-researcher**, 15000 JD, 2018-2020.
- The effect of metformin treatment on the levels of age biomarkers in patients with type 2 diabetes. Deanship of Scientific Research, The University of Jordan. **Co-researcher**, 15000 JD, 2018-2020.
- In vitro and kinetic studies evaluation for drug-like stabilizers of the reduced form of angiotensinogen upon oxidative stress as a new potential approach for the treatment

of pre-eclampsia. Deanship of Scientific Research, The University of Jordan. **Principal investigator**, 20000 JD, 2017-2020.

- Discovery of small molecule stabilizers for the reduced form of angiotensinogen as a potential treatment of pre-eclampsia using molecular dynamics simulation and in vitro evaluation, Abdul Hameed Shoman Foundation, **Principal investigator**, 15000 JD, 2017-2019.
- Evaluation and validation of biomarkers in a case control study of pre-eclampsia. Deanship of Scientific Research, The University of Jordan. **Principal investigator**, 10000 JD, 2018-2019.
- Folate-targeted β -cyclodextrin mesoporous silica nanoparticles for enhanced drug efficacy in cancer therapy. Hamdi Mango Center for Scientific Research, The University of Jordan. **Principal investigator**, 6000 JD, 2017-2019.

Membership in Local and International Societies

- Jordanian Users Committee for Synchrotron-light for Experimental Science and Applications in the Middle East (SESAME), 2017-present.
- Middle East Molecular Biology Sources (MEMBS), 2017-present.
- Jordan Society for Scientific Research, entrepreneurship and creativity, 2020-present
- Association of Jordanian Women Academics, 2020-present
- Jordan Association of Pharmacists, 2005-present
- Biochemical Society, 2015-present
- British Society for Proteome Research, 2015-2017
- American Society for Mass Spectrometry