



## Dr. Mahmood Ahmed

**DOB:** 01-01-1980

Address: 18 A, Ali Block Madina Homes Behind Descon Engineering, 18-km Ferozpur Road Lahore

[mahmoodresearchscholar@gmail.com](mailto:mahmoodresearchscholar@gmail.com), [mahmood.ahmed@ue.edu.pk](mailto:mahmood.ahmed@ue.edu.pk)

Cell 0092 300 8819844, 0092 333 4878610

## Profile Summary

Dr Mahmood Ahmed is an Assistant Professor of Chemistry, Department of Chemistry, Division of Science and Technology, University of Education, College Road, Lahore-Pakistan. He received his M.Sc. (January, 2003), M.Phil. (July, 2013) and PhD (March, 2018) degrees in Chemistry from Institute of Chemistry, University of the Punjab, Lahore-Pakistan. He has more than 18 years of professional experience in pharmaceutical industry where he did quality by design (QbD) based project for manufacturing of haemodialysis concentrates in Pakistan & Malaysia. His research interest involve synthesis of novel drug analogs and tested them for various pharmacological properties against different phenotypes of various disease models like antibacterial, antifungal, FIC index calculations, anti-inflammatory, analgesic activities, enzymatic assay (cyclooxygenase, urease,  $\alpha$ -glucosidase, carbonic anhydrase). Also, his core analytical chemistry interest is development, optimization and validation of HPLC methods for stability indicating assays for the analysis of drugs in real samples of different dosage forms, urine and plasma samples as per international regulatory guidelines including ICH, FDA, EMA & USP. He is also working on extraction of trace, essential, toxic, heavy metals in water, soil and food items including vegetables, fruit, milk by different techniques such as conventional acid digestion, ultrasound and microwave assisted extraction to characterize human health toxicity. His interests focus on analytical data treatment, including outlier identification in univariate and multivariate datasets, significance testing, signals/noise, and univariate and multivariate calibration/validation. He has "hands-on experience" of AAS, UV-VIS spectrophotometer, HPLC, UFLC, ICP-OES, FTIR, TOC analyzer, Dissolution apparatus, Flame photometer, Refractometer, Polarimeter, Liquid particle counter, Karl Fischer. Teaching analytical, pharmaceutical and medicinal chemistry including laboratory practical at BS, MS level and supervising the students at MS & PhD level in the same field. He has published 96 research articles as author/co-author in national and international peer reviewed journals, resulted in 1297 citations, impact factor = 163.210, h-index = 18 and i10-index = 35. He has reviewed 416 research articles for 64 international journals and handled 12 articles as an editor.

**Google Scholar.** <https://scholar.google.com.pk/citations?user=GAa1VMUAAAAJ&hl=en>

**ORCID.** <http://orcid.org/0000-0002-2285-7406>

**Researcher ID.** D-1320-2015, **Scopus Author ID.** 7402832094

## Education

**PhD (Chemistry). March, 2018**

**Institute of Chemistry, University of the Punjab, Lahore**

**Thesis Title.** Synthesis, characterization of novel curcumin analogs and their biological activities

**M. Phil. (Analytical Chemistry). July, 2013**

**Institute of Chemistry, University of the Punjab, Lahore**

**Thesis Title.** Optimization and validation of RP-HPLC method for determination of organic acids in disinfectants and evaluation of their bactericidal activity against E. coli, S. aureus and P. aeruginosa

**M.Sc. (Analytical Chemistry). January, 2003**

**Institute of Chemistry, University of the Punjab, Lahore**

**Thesis Title.** Analysis of phenol in textile effluents and their treatment by locally available adsorbents

## Professional, Teaching & Research Experience

- **Assistant Professor (TTS):** Department of Chemistry, Division of Science and Technology, University of Education, Lahore: December 10, 2021 to date
- **Visiting Faculty:** Department of Chemistry, Division of Science and Technology, University of Education, Lahore: March 4, 2020 to September 9, 2020
- **Head of Plant Operations/Management Representative:** Renacon Pharma Limited, Lahore: July 1, 2020 to December 8, 2021
- **Head Quality Operations and R & D/Management Representative:** Renacon Pharma Limited, Lahore: November 1, 2019 to June 30, 2020
- **Quality Control Incharge/Management Representative:** Renacon Pharma Limited, Lahore: September 20, 2005 to October 1, 2019
- **Analytical Chemist:** Renacon Pharma Limited, Lahore: April 1, 2003 to September 20, 2005

## Chemistry Courses & Research

- Teaching analytical, pharmaceutical and medicinal chemistry including laboratory practical at BS, MS level
- Supervision of research students @ MS and PhD level in the area of analytical, pharmaceutical and medicinal chemistry

## M. Phil. Supervision & Co-supervision

1. Investigation of trace and heavy metals in cosmetic products and evaluation of their toxic effect on human health: A risk assessment study. Aamir Sohail, Department of Chemistry, University of Education, Lahore. Session 2021-2023 (**Supervision**)
2. Risk Assessment of Exposure to Trace and Heavy Metals via Consumption of Different Types of Tea for Consumers. Ayyan Khan, Department of Chemistry, University of Education, Lahore. Session 2021-2023 (**Supervision**)
3. Synthesis and Characterization of Metal Curcumin Nanoparticles to enhance its bioavailability and therapeutic activities. Ayesha Asghar, Center for Bioinformatics and Drug Design, School of Biochemistry and Biotechnology, University of the Punjab, Lahore Session 2020-2022 (**Co-supervision**)
4. Development of Eco-Friendly High Performance Liquid Chromatographic Method for Analysis of Amiodarone and Metoprolol. Ammara Zahid, Institute of Pharmaceutical Sciences, University of Veterinary & Animal Sciences, Lahore Session 2020-2022 (**Co-supervision**)
5. Screening, detection and quantification of NDMA in nitrogen containing anti-depressant drugs. Ahmed Ali, Institute of Pharmaceutical Sciences, University of Veterinary & Animal Sciences, Lahore Session 2020-2022 (**Co-supervision**)
6. Development and Validation of New RP-HPLC Method for the Analysis of Sulfamethoxazole and Trimethoprim in Liquid Suspension and its Comparison with Compendial Method. Shahzad Ali, Department of Chemistry, University of Education, Lahore. Session 2019-2021 (**Co-supervision**)
7. Eco Friendly Ultra-Fast Chromatographic Method for the Determination of Cefixime and its E-Isomer in Active Pharmaceutical Ingredients. Sadia Inayat, Department of Chemistry, University of Education, Lahore. Session 2019-2021 (**Co-supervision**)
8. Comparison of Pasteurized and Unpasteurized Milk Quality in Lahore Region and Detection of Possible Adulterants by Using Standard Methods. Maria Akram, Department of Chemistry, University of Engineering and Technology, Lahore. Session 2018-2020 (**Co-supervision**)

## Academic Professional Activities

- Focal Person, MOU between University of Education and Novamed Pharmaceuticals (Pvt.) Limited, Lahore vide Notification No UE/R/2022/3342
- Paper Setter, BS-Chemistry, University of Education, Lahore-Pakistan
- Member Research Proposal Review Committee, Department of Chemistry, Division of Science and Technology, University of Education, Lahore-Pakistan
- Member University Sports Committee (Football), Sports Week, 28 March-01 April, 2022, University of Education, Lahore-Pakistan
- Member Admission Committee, Department of Chemistry, Division of Science and Technology, University of Education, Lahore-Pakistan

- Member Organizing Committee, 1<sup>st</sup> International Conference (online). Trends & Research in Chemistry (TRIC 2022), Department of Chemistry, Division of Science and Technology, University of Education, Lahore-Pakistan: Jan. 18-19, 2022
- Program Team Member to Prepare Self-Assessment Report of MS-Chemistry for Year, 2021-2022, Department of Chemistry, Division of Science and Technology, University of Education, Lahore-Pakistan
- External examiner for MSc thesis-University of the Punjab, Lahore
- External examiner for B.Sc. practical papers-University of the Punjab, Lahore
- External examiner for BS-MS thesis-University of the Punjab, Lahore

## Editorship & Memberships

- **Member** American Chemical Society, USA: Membership ID 30980472
- **Academic Editor**, Journal of Chemistry, Hindawi Limited, Adam House, Third Floor 1 Fitzroy Square London W1T 5HF, United Kingdom
- **Guest Associate Editor**, Frontiers in Chemistry, Special Issue on “Non-sulfonamide Molecules as Human Carbonic Anhydrase Inhibitor”
- **Lead Guest Editor**, Journal of Chemistry, Special Issue on “Toxic and Heavy Metals in Food Items”
- **Member editorial board**, Indonesian Journal of Chemistry, Indonesia
- **Member** Royal Society of Chemistry, UK: Membership ID 716868
- **Editorial Board Member**, Current Cosmetic Science, Bentham Science

## Workshops, Seminars & Conferences

1. Participation: Enhancing Your Imaging Workflows and Ultrastructural Data Using Biological EDS, 2 February 2023, Wiley Analytical Sciences
2. Oral Presentation. Alkyl Chain Linked Thiourea Derivatives: Synthesis, Biological Activities, In Vitro and In Silico Studies, II-International Congress on Modern Sciences, December 16-17, 2022 / Tashkent, Uzbekistan
3. Oral Presentation. Trace and heavy metals in different types of sauces: Evaluation of human health risk, 3. International Hasankeyf Scientific Research and Innovation Congress, Batman/ Türkiye, 17-18 December 2022
4. Oral Presentation. Contamination of Soil and Water by Toxic and Heavy Metals: Evaluation of Their Impact on Human, Cappadocia-Nevsehir, Türkiye, 11-12 December 2022.
5. Participation. Improvement in Sample Preparation and LC-MS Analysis of Therapeutic Oligonucleotides, eLearning Phenomenex, November 25, 2022
6. Participation. Harmonization of Ph. Eur. 2.2.46 and USP 621-New Allowed Adjustments, eLearning Phenomenex, November 16, 2022
7. Participation. Using Core Shell Particle Technology to Improve Micro and Nano LC Separations, eLearning Phenomenex, September 27, 2022
8. Oral Presentation, Title: Anti-Inflammatory and Antinociceptive Activities of Curcumin-Schiff Bases Containing Sulfonamides & Chair of Technical Session, (September 16, 2022). BILTEK-VI, 6. International Symposium on Current Developments in Science, Technology and Social Sciences, September 16-18, 2022/Malatya, Türkiye
9. Participation. Common LC Troubleshooting Mistakes and What to Do Instead, eLearning Phenomenex, September 20, 2022
10. Participation. How to choose your C18 Column, eLearning Phenomenex, September 08, 2022
11. Oral Presentation, Title: Screening Of Curcumin-Schiff Bases Containing Sulfonamides as Antibacterial and Antifungal Agents, & Head of Session-3 (September 03, 2022). International Congress on Natural & Medical Sciences, September 02-04, 2022, Ege University, Izmir, Türkiye
12. Participation. An Overview of Preparative Chromatography, eLearning Phenomenex, August 30, 2022
13. Participation. Exploring LC Selectivity using Steroids in Clinical Setting, eLearning Phenomenex, August 25, 2022
14. Participation. Column selection for special cases: High throughput, High pH, High aqueous, High retention/resolution eLearning Phenomenex, August 4, 2022
15. Participation. Miniaturization and automation of oligonucleotide sample preparation, eLearning Phenomenex, July 28, 2022

16. Oral Presentation, Title: Non-Essential/Toxic Trace Metals in Vegetables: An Evaluation of Human Health Risk. June 25, 2022. International Conference on Global Practice of Multidisciplinary Scientific Studies Dedicated to the 100th Anniversary of "Georgian Technical University – GTU (online), Tbilisi-Georgia, Georgian Technical University, June 24-26, 2022
17. Participation. Advances in Sample Preparation Technique for extraction of Polar Analytes from Various Matrices, .eLearning Phenomenex, June 15, 2022
18. Participation. GC Troubleshooting Tips and Tricks from Inlet through Detection, Phenomenex, May 26, 2022
19. Participation. Trouble shooting LC system contamination, eLearning Phenomenex, May 19, 2022
20. Participation. How to boost the selectivity of your separation in Flash Chromatography, eLearning Phenomenex, May 12, 2022
21. Oral Presentation, Title: Antibacterial effects of diazotized curcumin containing sulfonamides. April 28, 2022. International Scientific Research Congress (online), Dedicated to 30<sup>th</sup> Anniversary of Baku Eurasia University, Baku, Azerbaijan: April 28, 2022
22. Participation. Wiley Editor Seminar: The value of Open Research Publishing (online). Organizer, Wiley, April. 26, 2022
23. Oral Presentation, Title: Curcumin derivatives: Anti-inflammatory, analgesic, ulcerogenic, cyclooxygenase-2 inhibition and molecular docking studies April 15, 2022. CUKUROVA-8<sup>th</sup> International Scientific Researches Conference (online), Adana, Turkey: April 15-17, 2022
24. Participation. United Nation Environment Programme-Global Environment Facility (UNEP-GEP) Project. 1<sup>st</sup> Pakistan National Biosafety Clearing House (BCH) Workshop (online). Feb 28-March 2, 2022
25. Oral Presentation, Title: Curcumin heterocyclics as urease inhibitors. In vitro biological activities and molecular docking studies. Feb.22, 2022. MAS 16<sup>th</sup> International European Conference on Mathematics, Engineering, Natural & Medical Sciences (online), Mardin, Turkey: Feb. 22-23, 2022
26. Oral Presentation, Title: Discovery of curcumin heterocyclics containing sulfonamides for carbonic anhydrase inhibition and molecular docking studies. Feb.18, 2022. International Euroasia Congress on Scientific Research and Recent Trends-IX (online), Antalya, Turkey: Feb. 18-20, 2022
27. Participation. Dissecting the scholarly publishing process. A current overview on the steps to getting published. Organizer, Wiley, Jan. 26, 2022
28. Oral Presentation, Title: Nutritious and Harmful Elements in Curcuma Longa L. A Source of Therapeutically Important Curcumin & Head of Session-2 (Jan. 22, 2022). 7<sup>th</sup> International Zeugma Conference on Scientific Research (online), Gaziantep, Turkey: Jan. 21-23, 2022
29. Oral Presentation, Title: Analytical Instrument Qualification and Method Validation (AIQ & MV)-A Scientific Approach & Head of Session-2 (Jan. 19, 2022). 1<sup>st</sup> International Conference (online). Trends & Research in Chemistry (TRIC 2022), Department of Chemistry, Division of Science and Technology, University of Education, Lahore-Pakistan: Jan. 18-19, 2022
30. Participation. 25<sup>th</sup> National and 13<sup>th</sup> International Chemistry Conference, Institute of Chemistry, University of the Punjab, Lahore-Pakistan: October 20-22, 2014
31. Participation. Training Workshop on GMP Guidelines regarding Quality Management, Personnel Sanitation & Hygiene, and Premises & Good Documentation Practices as per WHO GMP guidelines. Lahore Chamber of Commerce & Industry: April, 2012.
32. Participation. International workshop on pharmaceutical equipment validation & Qualification and Calibration at NIPIR- New Delhi, India: June 15, 2007
33. Participation. The kidney foundation's biennial symposium by kidney foundation Pakistan, February 23-26, 2006, Karachi

## Trainings

1. Foundation of GMP: Active Pharmaceutical Ingredient (API), USP Education, August 11, 2021
2. Foundation of GMP: Data Integrity and Computer System Validation, USP Education, August 11, 2021
3. Foundation of GMP: Deviations, Root Cause Analysis (RCA) Tools and Corrective and Preventive Action (CAPA) - Sequence flow for handling of any non-conformance in the GMP environment, USP Education, August 04, 2021
4. Foundation of GMP: Medicinal Products, USP Education, August 04, 2021
5. Foundation of GMP: Auditing, USP Education, August 02, 2021
6. Foundation of GMP: Quality Risk Management, USP Education, August 02, 2021
7. Foundation of GMP: HVAC System, USP Education, June 08, 2020
8. Foundation of GMP: Qualification, USP Education, May 03, 2020

9. Foundation of GMP: Validation, USP Education, April 27, 2020
10. Foundation of GMP: Water Systems, USP Education, April 26, 2020
11. Training session on understanding the requirements of ETO Sterilization ISO 11135:2014 and Clean Room Manufacturing ISO 14644-1:2015 for Medical Devices. 20-21 April 2020, Online, Sialkot (Trainer)
12. ISO 13485:2016 Medical Device Quality Management Systems Transition Training Course, July 11-12, 2018, Sialkot
13. ISO 9001:2015 Quality Management System- Documentation & Internal Audit by SGS-Pakistan, Oct. 31- Nov. 01, 2016, Lahore
14. Revised MDD Directive 93/42/EEC (2007/47/EC) conducted by SGS-Pakistan, December 4, 2009, Lahore
15. CE marking for medical devices under directive 93/42/EEC & ISO 13485:2003 conducted by SGS-UK, Lahore, February, 9, 2007

## Foreign Visits

- Evaluation of Canaan Technologies, Nanjing & Wenzhou, China, for water treatment and blending systems. July, 29-30, 2019
- Evaluation of OCI Medical (Member of LEPU medical group), Chengdu, China, for dialyzer. July, 26, 2019
- Evaluation of Sanxin MedTec., Nanchang, China, for BTL and dialyzer. July, 26-27, 2019
- Evaluation of BWT, Shanghai China, for water treatment system. July, 25, 2019
- Evaluation of DC Pack & Lee Pack. Seoul South Korea, for liquid and powder filling line for haemodialysis plant, July, 21-24, 2019
- Evaluation of MH Multipack Sdn. Bhd. Pinang Malaysia, for liquid filling line for haemodialysis plant, May, 27-29, 2019
- China International Medical Equipment Fair (CMEF), Shanghai, China April, 11-13, 2018
- Qualification of Sanxin MedTec., Nanchang, China, for BTL and dialyzer. April, 14-15, 2018
- Leheng, Beijing, China, MVR related discussion for sodium chloride project April, 16-18, 2018
- China International Pharmaceutical Machinery Exposition (CIPM), Chongqing, China April, 20-21, 2018.
- Consultancy provision regarding haemodialysis concentrates to Well Pharma, Abu Dhabi, UAE: Feb. 16-19, 2016
- Installation & operational activities in Renacon Pharma Sdn. Bhd., Malaysia: Nov. 12-20, 2014
- R&D meeting (for product development regarding food supplement) with "DuPont USA" largest soy protein producing company, have an Asian regional office in - New Delhi, India: June 13-14, 2007

## Reviewership for Peer Reviewed International Referred Journals

1. Luminescence, **John Wiley & Sons**
2. Journal of Food Science and Technology, **Springer Nature**
3. International Journal of Food Contaminants, **Springer, BMC**
4. Journal of Brazilian Chemical Society, **Brazil**
5. Food Analytical Methods, **Springer Nature**
6. Eurasian Journal of Analytical Chemistry, **Turkey**
7. Food Chemistry, **Elsevier**
8. Korean Journal for Food Science of Animal Resources, **KoSFA, Korea**
9. Journal of Apicultural Research, **Taylor & Francis**
10. Nucleosides Nucleotides & Nucleic Acids, **Taylor & Francis**
11. Natural Product Research, **Taylor & Francis**
12. Saudi Journal of Biological Sciences, **Elsevier**
13. Latin American Journal of Pharmacy, **Argentina**
14. Analytical Letters, **Taylor & Francis**
15. Bioorganic Chemistry, **Elsevier**
16. Innovative Food Science & Emerging Technologies, **Elsevier**
17. Journal of Liquid Chromatography and Related Technologies, **Taylor & Francis**
18. International Journal of Food Properties, **Taylor & Francis**
19. Atmospheric Pollution Research, **Elsevier**
20. Analytical Methods, **Royal Society of Chemistry**
21. Journal of Cleaner Production, **Elsevier**

22. RSC Advances, **Royal Society of Chemistry**
  23. Revista de Nutricao-Brazilian Journal of Nutrition, **Brazil**
  24. Journal of Analytical Methods in Chemistry, **Hindawi**
  25. Separation Science Plus, **John Wiley & Sons**
  26. Archiv der Pharmazie, **John Wiley & Sons**
  27. BioMed Research International, **Hindawi**
  28. Microchemical Journal, **Elsevier**
  29. Data in Brief, **Elsevier**
  30. Biomedical Chromatography, **John Wiley & Sons**
  31. Journal of Chemistry, **Hindawi**
  32. Drug Design, Development and Therapy, **Dove Press, New Zealand**
  33. Research on Chemical Intermediates, **Springer Nature**
  34. Chemical Science International Journal, **SCIENCEDOMAIN International, India**
  35. Medicinal Chemistry Research, **Springer Nature**
  36. Biodiversity, **Taylor & Francis**
  37. Acta Chromatographica, **Poland**
  38. Malaysian Journal of Pharmaceutical Sciences, **Malaysia**
  39. Polycyclic Aromatic Compounds, **Taylor & Francis**
  40. Current Cosmetic Science, **Bentham Science**
  41. Exposure and Health, **Springer Nature**
  42. Journal of Indian Chemical Society, **Elsevier**
  43. Indian Journal of Pharmaceutical Science
  44. SONGKALAKARIN Journal of Science and Technology, **Thailand**
  45. Indonesian Journal of Chemistry, **Indonesia**
  46. Frontiers in Endocrinology, **Switzerland**
  47. Molecules, **MDPI, Switzerland**
  48. Environmental Monitoring and Assessment, **Springer Nature**
  49. ChemistrySelect, **John Wiley & Sons**
  50. Food Chemistry: X, **Elsevier**
  51. ACS Omega, **ACS-USA**
  52. Journal of Food Quality, **Wiley & Hindawi**
  53. Journal of Molecular Structures, **Elsevier**
  54. Pharmaceutics, **MDPI, Switzerland**
  55. Heliyon, **Cell Press, USA**
  56. Bioengineering, **MDPI, Switzerland**
  57. Sustainable Chemistry and Pharmacy, **Elsevier**
  58. Journal of Taibah University for Science, **Taylor & Francis**
  59. International Journal of Molecular Sciences, **MDPI, Switzerland**
  60. Results in Chemistry, **Elsevier**
  61. Inorganic Chemistry Communications, **Elsevier**
  62. Separations, **MDPI, Switzerland**
  63. Protocols and Methods, **MDPI, Switzerland**
  64. Applied Sciences, **MDPI, Switzerland**
- 

## QMS, MDD & Data Handling Skills

1. **ISO 45001:2018**, Occupational health and safety management system- requirements with guidance for use, specifies requirements for an OH&S management system to enable organization to provide safe and healthy workplace by preventing work-related injuries and ill health as well as by proactively improving its OH&S performance.

2. **ISO 14001:2015**, Environmental management system-requirements with guidance for use, specifies the requirements for an environmental management system that an organization can use to enhance its environmental performance, seeking to manage its environmental policies in a systematic manner that contributes to environmental pillar of sustainability.
3. **ISO 11135:2014**, Sterilization of health-care products Ethylene oxide-Requirements for the development, validation and routine control of a sterilization process for medical devices.
4. **Site master file (SMF)**, Renacon Pharma Limited, a largest manufacturer of various types of haemodialysis concentrate (liquid & solid dosage form), and related products including disinfectants, sterilents in Pakistan. SMF is useful to the regulatory authorities & certified bodies in planning and conducting GMP inspections, MDD & QMS audits.
5. **MDD, European Directive 93/42/EEC**, Annexure II (excluding section 4) for manufacturing of haemodialysis concentrates.
6. **EN ISO 14971:2012**, Application of risk management to medical device, estimate and evaluates the risks, control these risks and monitor the effectiveness of control. This risk analysis is applicable to all stages of life cycle of all types of haemodialysis concentrates.
7. **ISO 23500-4:2019**, Concentrates for haemodialysis and related therapies, document includes concentrates in both liquid and powder forms, also specifies requirements for equipment used to mix acid and bicarbonate powders into concentrate at the user's facility.
8. **ISO 23500-3:2019**, Water for haemodialysis and related therapies, document includes water to be used in the preparation of concentrates, dialysis fluids for haemodialysis, haemodiafiltration and haemofiltration, and for the reprocessing of haemodialysers.
9. **ISO 14644:2015**, Cleanrooms and associated controlled environments, the classification of air cleanliness in terms of concentration of airborne particles in cleanrooms and clean zones; and separative devices as defined in ISO 14644-7.
10. **I.S. EN 1041:2008+A1:2013**, Information supplied by manufacturer of medical devices, European Standard specifies requirements for information to be supplied by a manufacturer for medical devices regulated by Council Directive 93/42/EEC concerning haemodialysis concentrates.
11. **ISO 15223-1:2016**, Medical devices - Symbols to be used with medical device labels, labelling and information to be supplied, document identifies requirements for symbols used in haemodialysis concentrates labelling that convey information on the safe and effective use of haemodialysis concentrates, which are marketed globally and therefore need to meet different regulatory requirements
12. **ISO 10993-1:2009**, Biological evaluation of medical devices - Part 1: Evaluation and testing within a risk management process, the assessment of the biological safety of the haemodialysis concentrates
13. **ISO 9001:2015** Quality management system, organization demonstrates its ability to consistently provide products and services that meet customer and applicable statutory and regulatory requirements
14. **ISO 13485:2016** Medical devices – Quality management systems - Requirements for regulatory purposes, a quality management system where an organization needs to demonstrate its ability to provide medical devices and related services that consistently meet customer and applicable regulatory requirements. Throughout the life-cycle including design and development, production, storage and distribution, installation, or servicing of a medical device and design and development or provision of associated activities such as technical support.

1. **MS Office**
2. **SPSS®**- software package used for interactive, or batched, statistical analysis
3. **ChemDraw**, analytical and chemical property data of structures and fragments
4. **ChemSketch**, molecular modeling program used to create and modify images of chemical structures
5. **GraphPad Prism**, scientific 2D graphing and statistics software
6. **Origin**, program for interactive scientific graphing and data analysis
7. **ArcGIS**, geographic information system for working with maps and geographic information
8. **BioRender**, a science illustration tool used to create high-quality diagrams for publications, presentations, posters, patents etc.

## Editorials

1. Mahmood Ahmed, Metal Contaminated Turmeric: A Threat to Human Health. CPQ Nutrition (2019) 3 (5): 1-2
2. Mahmood Ahmed, Sulfonamides: A Promising Pharmacophore as Carbonic Anhydrase Inhibitor. CPQ Medicine 2018 2 (3): 1-2
3. Mahmood Ahmed, Curcumin: An Important Phytochemical. CPQ Medicine 2018 1 (5): 1-2
4. Mahmood Ahmed, Metal Contamination in Milk: A Potential Human Health Toxicity. CPQ Nutrition (2018) 1 (6): 1-2

## Research Publications

### Year 2023

1. Shabbir Hussain, Muazzam Ali Muazzam, \***Mahmood Ahmed**, Muhammad Ahmad, Zeeshan Mustafa, Shahzad Murtaza, Jigar Ali, Muhammad Ibrar, Muhammad Shahid & Muhammad Imran. Green synthesis of nickel oxide nanoparticles using *Acacia nilotica* leaf extracts and investigation of their electrochemical and biological properties. *Journal of Taibah University for Science* 2023, 17, 2170162, **Impact factor: 3.459**
2. Waqar Ahmad, Muhammad Zubair, \***Mahmood Ahmed**, Muhammad Ahmad, Shoomaila Latif, Abdul Hameed, Qudsia Kanwal, Dure Najaf Iqbal. Assessment of potentially toxic metal(loid)s contamination in soil near the industrial landfill and impact on human health: an evaluation of risk. *Environmental Geochemistry and Health* 2023 , **Impact factor: 4.898**
3. Muhammad Imran Din, \***Mahmood Ahmed**, Muhammad Ahmad, Mahroosh Iqbal, Zahoor Ahmad, Zaib Hussain, Rida Khalid, Abdul Samad. Investigating the Activity of Carbon Fiber Electrode for Electricity Generation from Waste Potatoes in a Single-Chambered Microbial Fuel Cell. *Journal of Chemistry* 2023 Article ID 8520657, 8 pages, **Impact factor: 3.241**
4. Muhammad Ahmad, \***Mahmood Ahmed**, Shabbir Hussain, Abid Ali, Manzar Zahra, Muhammad Imran Din, Zeeshan Mustafa. Polyelectrolyte multilayers coating of aliphatic polyamide anion-exchange membranes to increase monovalent/divalent anions selectivity in electrodialysis. *Desalination* 2023, 545, 116159, **Impact factor: 11.211**

### Year 2022

5. Qamar Saeed, Faheem Ahmad, Numan Yousaf, Haider Ali, Syed Azhar Ali Shah Tirmazi, Abdulrahman Alshammari, Naeema Kausar, **Mahmood Ahmed**, Muhammad Imran, Muhammad Jamshed, Metab Alharbi, Muhammad Muddassar. In Silico and In Vivo Evaluation of Synthesized SCP-2 Inhibiting Compounds on Life Table Parameters of *Helicoverpa armigera* (Hübner). *Insects* 2022, 13, 1169 **Impact factor: 3.141**
6. Majida Mujahid1, Shoomaila Latif, \***Mahmood Ahmed**, Warda Shehzadi, Muhammad Imran, Muhammad Ahmad, Asnuzilawati Asari, Muhammad Jehangir, Zaid Mahmud. Modified matrix solid phase dispersion-HPLC method for determination of pesticide residue in vegetables and their impact on human health: A risk assessment. *Frontiers in Chemistry* 2022, 10, 1084350 **Impact factor: 5.545**
7. Noureen Ashraf, Asnuzilawati Asari, Numan Yousaf, Matloob Ahmad, **Mahmood Ahmed**, Amir Faisal, Muhammad Saleem Muhammad Muddassar. Combined 3D-QSAR, Molecular docking and dynamics simulations studies to model and design TTK inhibitors. *Frontiers in Chemistry* 2022, 10, 1003816 **Impact factor: 5.545**
8. Muhammad Imran Din, \***Mahmood Ahmed**, Muhammad Ahmad, Tayabba Ghaffar, Zaib Hussain, Rida Khalid, Abdul Samad. Novel and facile synthesis of biodegradable plastic films from cornmeal by microwave polymerization technique. *Journal of Chemistry* 2022 Article ID 5697099, 8 pages, **Impact factor: 3.241**
9. Anum Khaleeq, \***Mahmood Ahmed**, Rahila Huma, Aiman Mujtaba, Sara Noor, Rimsha Rehman, Tahir Ali Sheikh, Shaista Qamar, Dure Najaf Iqbal, Rima D. Alharthy, Abdul Hameed. Evaluation of trace and heavy metals in different varieties of sauces to characterize their impact on human health. *Journal of Food Composition and Analysis* 2022, 114, 104789, **Impact factor: 4.520**
10. Muhammad Aslam, Sajid Iqbal, Zahra Noreen, Itrat Anis, Abrar Hussain, Shahid Masood, **Mahmood Ahmed**, Muhammad Kamran Shahid, Aamir Ali. Quantitative determination of caffeine in imported energy drinks of Lahore, Pakistan. *Journal of Natural and Applied Sciences Pakistan* 2022, 4 (1): 839-849
11. Imdad Ali, Ibanga Okon Isaac, \***Mahmood Ahmed**, Farid Ahmed, Farhat Ikram, Muhammad Ateeq, Rima D. Alharthy, Muhammad Imran Malik, Abdul Hameed, Muhammad Raza Shah. Acridine-2, 4-dinitrophenyl hydrazone conjugated silver nanoparticles as an efficient sensor for quantification of mercury in tap water. *Journal of Chemistry* 2022 Article ID 6823140, 12 pages, **Impact factor: 3.241**



12. Shabnam Sarwar, Muhammad Abdul Qadir, Rima D. Alharthy, **\*Mahmood Ahmed**, Saghir Ahmad, Michiel Vanmeert, Muhammad Usman Mirza, Abdul Hameed. Folate Conjugated Polyethylene Glycol Probe for Tumor-Targeted Drug Delivery of 5-Fluorouracil. *Molecules* 2022, 27 (6): 1780, **Impact factor: 4.927**
13. Sana Yaqoob, Abdul Hameed, **\*Mahmood Ahmed**, Muhammad Imran, Muhammad Abdul Qadir, Mahwish Ramzan, Numan Yousaf, Jamshed Iqbal, Muhammad Muddassar. Antiurease screening of alkyl chain linked thiourea derivatives: In vitro biological activities, molecular docking and dynamic simulations studies. *RSC Advances* 2022, 12: 6292-6302, **Impact factor: 4.036**
14. Muhammad Yasir Mehboob, Riaz Hussain, Saba Jamil, **Mahmood Ahmed**, Muhammad Usman Khan, Muhammad Haroon. Muhammad Ramzan Saeed Ashraf Janjua. Physical-organic aspects along with linear and nonlinear optical properties of benzene sulfonamide compounds: In silico analysis. *Journal of Physical Organic Chemistry* 2022, 35(4), e4313. **Impact factor: 2.155**

## Year 2021

15. Muhammad Saleem, Arjumand Iqbal Durani, Rima D. Alharthy, **\*Mahmood Ahmed**, Muhammad Imtiaz Shafiq, Abdul Hameed, Syed Mubasher Hussain, Waqas Bashir. Ultrasound assisted extraction of micro and macro elements in fruit peels powder mineral supplement for osteoporosis patients and their determination by flame atomic absorption spectrometry. *Journal of Chemistry* 2021 Article ID 5151560, 10 pages, **Impact factor: 2.506**
16. Waqar Ahmad, Rima D. Alharthy, Muhammad Zubair, **\*Mahmood Ahmed**, Abdul Hameed, Sajjad Rafique. Toxic and heavy metals contamination assessment in soil and water to evaluate human health risk. *Scientific Reports* 2021, 11: 17006, **Impact factor: 4.379**
17. Iftikhar-Ul-Haq, Ejaz Ahmed, Ahsan Sharif, **\*Mahmood Ahmed**, Waqar Ahmad. Optimization of ultrasound-assisted extraction of essential and non-essential/toxic trace metals in vegetables and their determination by FAAS and ICP-OES: an evaluation of human health risk. *Food Analytical Methods* 2021, 14 (11): 2262-2275, **Impact factor: 3.366**
18. Syed Azhar Ali Shah Tirmazi, Muhammad Abdul Qadir, **\*Mahmood Ahmed**, Muhammad Imran, Riaz Hussain, Mehwish Sharif, Muhammad Yousaf, Muhammad Muddassar. Levofloxacin and sulfa drugs linked via Schiff bases: Exploring their urease inhibition, enzyme kinetics and in silico studies. *Journal of Molecular Structure* 2021, 1235, 130226, **Impact factor: 3.196**
19. **\*Mahmood Ahmed**, Saghir Ahmad, Masooma Irfan. A green ultra-fast liquid chromatographic method for quantification of curcumin in extract of curcuma longa L. followed by confirmation via spectroscopic techniques. *Separation Science Plus* 2021, 4 (3): 118-127, **Web of Science Index**
20. Abdul Samad, Muhammad Imran Din, **\*Mahmood Ahmed**, Saghir Ahmad. Novel Synthesis of Zinc Oxide Nanoparticles Reinforced Clay and Their Applications for Removal of Pb (II) Ions from Aqueous Media. *Chinese Journal of Chemical Engineering* 2021, 32: 454-461, **Impact factor: 3.171**
21. **\*Mahmood Ahmed**, Saghir Ahmad, Riaz Hussain, Anum Khaleeq, Iram Khan. A validated non-compendial method for determination of haemodialysis concentrate's contents and its comparison with compendial method: Application of ISO 13958:2014 standard. *Current Pharmaceutical Analysis* 2021, 17 (9): 1240-1248, **Impact factor: 0.890**

## Year 2020

22. Muhammad Jehangir, Dildar Ahmed, **\*Mahmood Ahmed**, Muhammad Naeem. Validated stability indicating HPLC and UFLC assay for the determination of azithromycin: Application to solid dosage and biological samples. *Latin American Journal of Pharmacy* 2020, 39 (8): 1491-99 **Impact factor: 0.240**
23. Abdul Samad, Muhammad Imran Din, **\*Mahmood Ahmed**. Studies on batch adsorptive removal of cadmium and nickel from synthetic waste water using silty clay originated from Balochistan-Pakistan. *Chinese Journal of Chemical Engineering*, 2020 28 (4): 1171-1176, **Impact factor: 2.627**

24. Abdul Samad, Muhammad Imran Din, \***Mahmood Ahmed**. Synthesis of zinc oxide nanoparticles impregnated clay tablets and their potential applications as point of use water purification intervention. *Desalination and Water Treatment*, 2020 181: 251-257, **Impact factor: 0.854**
25. Amir Ali, Umar Farooq, **Mahmood Ahmad**, Muhammad Makshoof Athar, Saira Arif, Kashif Nadeem, Hassan Naz. Stability indicating RP-HPLC assay for simultaneous determination of chlorpheniramine maleate and prednisolone in veterinary injection. *Acta Chromatographica* 2020 32 (2): 122-127, **Impact factor: 1.418**
26. Abdul Shakoor, \***Mahmood Ahmed**, Rabia Ikram, Sajad Hussain, Arifa Tahir, Badrul Mohamed Jan, Ahmad Adnan. Stability indicating RP-HPLC method for simultaneous determination of metformin hydrochloride and vildagliptin in tablet and biological samples. *Acta Chromatographica* 2020 32 (1): 39-43, **Impact factor: 1.418**
27. \***Mahmood Ahmed**, Syeda Kiran Shahzadi, Muhammad Abdul Qadir, Arjumand Iqbal Durrani, Saghir Ahmad, Iram Khan, Adil Munir, Anum Khaleeq. Exploring the Antioxidant Potential of Some Common Marketed Nutraceuticals/Drugs in Pakistan by Different In Vitro Models. *Latin American Journal of Pharmacy*, 2020 39 (2): 372-375, **Impact factor: 0.240**
28. \***Mahmood Ahmed**, Muhammad Abdul Qadir, Saghir Ahmad, Iftikhar-Ul-Haq, Riaz Hussain, Tayyaba Habib, Rabia Ikram, Muhammad Muddassar. Studies on the synthesis of benzene sulfonamides, evaluation of their antimicrobial activities and molecular docking. *Latin American Journal of Pharmacy*, 2020 39 (1): 38-46, **Impact factor: 0.240**
29. Shabnam Shahzad, Muhammad Abdul Qadir, **Mahmood Ahmed\***, Saghir Ahmad, Muhammad Jadoon Khan, Asad Gulzar, Muhammad Muddassar. Folic acid-sulfonamide conjugates as antibacterial agents: Design, synthesis and molecular docking studies. *RSC Advances* 2020 10 (70): 42983-42992, **Impact factor: 3.119**
30. \***Mahmood Ahmed**, Muhammad Imran, Muhammad Muddassar, Riaz Hussain, Muhammad Usman Khan, Saghir Ahmad, Muhammad Yasir Mehboob, Saira Ashfaq. Benzenesulfonohydrazides inhibiting urease: Design, synthesis, their in vitro and in silico studies. *Journal of Molecular Structure* 2020 1220: 128740, **Impact factor: 2.463**
31. Muhammad Imran, Saba Waqar, Koji Ogata, **Mahmood Ahmed**, Zobia Noreen, Sundus Javed, Nazia Bibi, Habib Bokhari, Asma Amjad, Muhammad Muddassar. Identification of novel bacterial urease inhibitors through molecular shape and structure based virtual screening approaches. *RSC Advances* 2020 10 (27): 16061-16070, **Impact factor: 3.119**
32. Rana Asif Nadeem, Muhammad Abdul Qadir, \***Mahmood Ahmed**, Imran Sajid. Cephalosporin conjugated sulfonamides: Synthesis, characterization and anticancer activities. *Letters in Drug Design and Discovery*, 2020 17 (3): 264-270, **Impact factor: 1.169**
33. Muhammad Yasir Mehboob, Riaz Hussain, Muhammad Usman Khan, Muhammad Adnan, Ali Umar, Muhammad Usman Alvi, **Mahmood Ahmed**, Muhammad Khalid, Javed Iqbal, Muhammad Nadeem Akhtar, Fatiqa Zafar, Mahrzadi Noreen Shahi. Designing N-phenylaniline-triazole configured donor material with promising optoelectronic properties for high efficiency solar cells. *Computational and Theoretical Chemistry*, 2020 1186: 112908, **Impact factor: 1.605**
34. Riaz Hussain, Muhammad Saeed, Muhammad Yasir Mehboob, Saif Ullah Khan, Muhammad Usman Khan, Muhammad Adnan, **Mahmood Ahmed**, Javed Iqbal, Khurshid Ayub. Density functional theory study of Palladium clusters adsorption on Graphene support. *RSC Advances* 2020 10 (35): 20595-20607, **Impact factor: 3.119**
35. Zainab Afzal, Riaz Hussain, Muhammad Usman Khan, Muhammad Khalid, Javed Iqbal, Muhammad Usman Alvi, Muhammad Adnan, **Mahmood Ahmed**, Muhammad Yasir Mehboob, Munawar Hussain, Chaudhary Jahrukh Tariq. Designing indenothiophene-based acceptors materials with efficient photovoltaic parameters for fullerene-free organic solar cells. *Journal of Molecular Modeling* 2020 26 (6): 137, **Impact factor: 1.346**
36. Riaz Hussain, Muhammad Usman Khan, Muhammad Yasir Mehboob, Muhammad Khalid, Javed Iqbal, Khurshid Ayub, Muhammad Adnan, **Mahmood Ahmed**, Kainat Atiq, Khalid Mahmood. Enhancement in photovoltaic properties of N,N-

diethylaniline based donor materials by bridging core modifications for efficient solar cells. ChemistrySelect 2020 5 (17): 5052-5034, **Impact factor: 1.811**

37. Shahid Hussain, Riaz Hussain, Muhammad Yasir Mehboob, Shahzad Ali Shahid Chatha, Abdullah Ijaz Hussain, Ali Umar, Muhammad Usman Khan, **Mahmood Ahmed**, Muhammad Adnan, Khurshid Ayub. Adsorption of Phosgene Gas on Pristine and Copper Decorated B12N12 Nanocages: A Comparative DFT Study. ACS Omega 2020 5 (13): 7641-7650, **Impact factor: 2.870**

## Year 2019

38. Shabnam Shahzad, Muhammad Abdul Qadir, Rashid Rasheed, **Mahmood Ahmed**, Synthesis of <sup>99m</sup>Tc-gemifloxacin freeze dried kits and their Biodistribution in Salmonella typhi, Pseudomonas aeruginosa and Klebsiella pneumonia. Arabian Journal of Chemistry, 2019 12 (5): 664-670, **Impact factor: 3.298**
39. Muhammad Irfan, Masooma Irfan, Syed Mazhar Shah, Nadeem Baig, Tawfik A. Saleh, **Mahmood Ahmed**, Gul Naz, Naeem Akhtar, Nawshad Muhammad, Ani Idris. Hemodialysis performance and anticoagulant activities of PVP-k25 and carboxylic-multiwall nanotube composite blended polyethersulfone membrane. Materials Science and Engineering: C, 2019 103: 109769;, **Impact factor: 4.959**
40. Sumera Noreen, Muhammad Abdul Qadir, \***Mahmood Ahmed**, Syeda Kiran Shahzadi, Muhammad Yousaf. Pegylated gemcitabine and methotrexate: In vitro cytotoxicity analysis and in vivo drug release profiling to assess their enhanced blood circulation. Acta Poloniae Pharmaceutica, 2019 76 (4): 653-659, **Impact factor: 0.447**
41. \***Mahmood Ahmed**, Muhammad Abdul Qadir, Muhammad Imtiaz Shafiq, Muhammad Muddassar, Zahoor Qadir Samra, Abdul Hameed. Synthesis, characterization, biological activities and molecular modeling of Schiff bases of benzene sulfonamides bearing curcumin scaffold. Arabian Journal of Chemistry, 2019 12 (1): 41-53, **Impact factor: 3.298**
42. Issam A. Mohammed, \***Mahmood Ahmed**, Rabia Ikram, Muhammad Muddassar, Muhammad Abdul Qadir, Khalijah Binti Awang. Synthesis of 1,3-benzoxazines based on 2,4,4-trimethyl-7,2',4'-trihydroxy flavan: Antibacterial, anti-inflammatory, cyclooxygenase-2 inhibition and molecular modelling studies. Letters in Drug Design & Discovery, 2019 16 (1): 58-65, **Impact factor: 0.953**
43. Abdul Shakoor, Ahmad Adnan, **Mahmood Ahmed**. Simultaneous Determination of Metformin and Vildagliptin by HPLC in Human Plasma: Application to Pharmacokinetic Studies. Latin American Journal of Pharmacy, 2019 38 (7): 1416-1423, **Impact factor: 0.290**
44. Abdul Shakoor, \***Mahmood Ahmed**, Ahmad Adnan, Riaz Hussain, Sajad Hussain , Kiren Rehman , Ayoub Rashid , Maria Mushtaq , Sadia Batool. Determination of metformin and vildagliptin in solid dosage form and rabbit plasma by HPLC: An application to pharmacokinetic study. Latin American Journal of Pharmacy, 2019 38 (2): 361-367, **Impact factor: 0.290**
45. Amir Ali, Muhammad Makshoof Athar, **Mahmood Ahmed**, Kashif Nadeem, Ghulam Murtaza, Umar Farooq, Muhammad Salman. Stability-indicating HPLC-PDA assay for simultaneous determination of paracetamol, thiamine and pyridoxal phosphate in tablet formulation. Acta Pharmaceutica 2019 69 (2): 249-259, **Impact factor: 1.405**

## Year 2018

46. Sumera Noreen, Syeda Kiran Shahzadi, Muhammad Abdul Qadir, **Mahmood Ahmed**, Development of novel derivatives of Pegylated doxorubicin: New anticancer drug delivery systems. Latin American Journal of Pharmacy, 2018 37 (8): 1572-1577, **Impact factor: 0.290**
47. Adeena Tahir, Rima D. Alharthy, Saadia Naseem, Natasha Mahmood, **Mahmood Ahmed**, Khuram Shahzad, Malik nadeem Akhtar, Abdul Hameed, Irfan Sadiq, Haq Nawaz, Muhammad Muddassar. Investigations of Structural Requirements for BRD4 Inhibitors Through Ligand and Structure Based 3D QSAR Approaches. Molecules, 2018 23 (7): 1527-1543, **Impact factor: 3.060**

48. Issam A. Mohammed, \***Mahmood Ahmed**, Rabia Ikram, Muhammad Abdul Qadir, Riaz Hussain. 1,3-Oxazepine Compounds Derived from Azomethine: Synthesis, Characterization and Antibacterial Evaluation. Latin American Journal of Pharmacy, 2018 37 (3): 540-546, **Impact factor: 0.290**
49. Rana Asif Nadeem, Muhammad Abdul Qadir, \***Mahmood Ahmed**, Imran Sajid, Tanzeela Gulab Shahzady. Development of sulfonamides of contemporary drugs as anticancer agents. Latin American Journal of Pharmacy, 2018 37 (6): 1144-1148,, **Impact factor: 0.290**
50. \***Mahmood Ahmed**, Muhammad Abdul Qadir, Abdul Hameed, Muhammad Imran, Muhammad Muddassar. Screening of curcumin derived isoxazole, pyrazoles and pyrimidines for their anti-inflammatory, antinociceptive and cyclooxygenase-2 inhibition. Chemical Biology and Drug Design, 2018, 91 (1): 338–343, **Impact factor: 2.256**
51. \***Mahmood Ahmed**, Muhammad Abdul Qadir, Abdul Hameed, Muhammad Nadeem Arshad, Abdullah M. Asiri, Muhammad Muddassar. Sulfonamides containing curcumin scaffold: Synthesis, characterization, carbonic anhydrase inhibition and molecular docking studies. Bioorganic Chemistry, 2018, 76: 218–227, **Impact factor: 3.926**
52. Muhammad Saqlain Tahir , \***Mahmood Ahmed** , Issam A. M., Muhammad Abdul Qadir, Ahmad Adnan, Ayoub Rashid, Quratulain Syed, Riaz Hussain, Low Kah Hin ,Rabia Ikram. Determination of Sofosbuvir and Velpatasvir in Solid Pharmaceutical Dosage Form by HPLC-PDA and Its Application to In Vitro Dissolution Studies. Latin American Journal of Pharmacy, 2018 37 (6): 1067-1073, **Impact factor: 0.290**
53. Asad Gulzar, \***Mahmood Ahmed**, Muhammad Abdul Qadir, Muhammad Imtiaz Shafiq, Sakhawat Ali, Ijaz Ahmad, Muhammad Farooq Mukhtar. Effect of blanching techniques and treatments on nutritional quality of dried mango slices during storage. Polish Journal of Food and Nutrition Sciences 2018, 68 (1): 5–13, **Impact factor: 1.514**

#### Year 2017

54. Muhammad Saqlain Tahir, \***Mahmood Ahmed**, Muhammad Imtiaz Shafiq, Pareesa Tariq, Ahmad Adnan, Ayoub Rashid, Quratulain Syed, Zahid Ali. Quick HPLC-PDA Method for Simultaneous Determination of Five Selected Quinolones in Commercial Pharmaceutical Formulations. Latin American Journal of Pharmacy, 2017 36 (11): 2136-2143, **Impact factor: 0.290**
55. Muhammad Jehangir, **Mahmood Ahmed**, Muhammad Imtiaz Shafiq, Abdul Samad, Iftikhar-ul Haq. UHPLC-PDA Assay for Simultaneous Determination of Vitamin D3 and Menaquinone-7 in Pharmaceutical Solid Dosage Formulation. Journal of Analytical Methods in Chemistry, 2017 Article ID 1208753, 9 pages, **Impact factor: 1.589**
56. \***Mahmood Ahmed**, Anum Khaleeq, Rahila Huma, Sehrish Munir. Atomic absorption and inductively coupled plasma–optical emission spectroscopic method for determination of micronutrients and toxic metals in Curcuma longa L. to characterize human health toxicity. Spectroscopy Letters 2017 50(8): 432-439 **Impact factor: 1.081**
57. Amir Ali, Umar Farooq, \***Mahmood Ahmed**, Muhammad Makshoof Athar, Kashif Nadeem, Ghulam Murtaza. Stability indicating UHPLC-PDA assay for simultaneous determination of antazoline hydrochloride and naphazoline hydrochloride in ophthalmic formulations. Acta Chimica Slovenica, 2017 64(2): 332-341 **Impact factor: 1.076**
58. \***Mahmood Ahmed**, Anum Khaleeq, Rubina Munir, Rahila Huma, Muhammad Muddassar, Saadia Naseem. Determination of macronutrients, micronutrients, non-essential elements in milk based-infant formulas by atomic absorption and inductively coupled plasma-optical emission spectroscopy after microwave and ultrasound assisted digestion. Spectroscopy Letters, 2017 50(2): 88-95 **Impact factor: 1.081**
59. **Mahmood Ahmed**, Muhammad Abdul Qadir, Muhammad Imtiaz Shafiq. Diazotized curcumin containing sulfonamides: Synthesis, characterization and antibacterial activities. Latin American Journal of Pharmacy, 2017 36(9): 1789-1795 **Impact factor: 0.290**

60. \***Mahmood Ahmed**, Muhammad Abdul Qadir, Abdul Hameed, Muhammad Nadeem Arshad, Abdullah M. Asiri, Muhammad Muddassar. Azomethines, isoxazole, N-substituted pyrazoles and pyrimidine containing curcumin derivatives: Urease inhibition and molecular modeling studies. *Biochemical and Biophysical Research Communications*, 2017 490(2): 434-440 **Impact factor: 2.705**
61. **Mahmood Ahmed**, Muhammad Abdul Qadir, Muhammad Imtiaz Shafiq, Muhammad Muddassar, Abdul Hameed, Muhammad Nadeem Arshad, Abdullah M. Asiri. Curcumin: Synthesis optimization and in silico interaction with cyclin dependent kinase. *Acta Pharmaceutica* 2017 67(3): 385-395 **Impact factor: 1.405**
62. Muhammad Abdul Qadir, \***Mahmood Ahmed**, Mudassar Kamal Malik, Irfan Ismail. Sorghum stalk yield and grain nutritional quality improvement by foliar metal chelates. *Pakistan Journal of Botany*, 2017 49(1): 109-114 **Impact factor: 0.672**

## Year 2016

63. Muhammad Imtiaz Shafiq, \***Mahmood Ahmed**, Ayesha Rasul, Zahoor Qadir Samra, Muhammad Abdul Qadir, Sania Mazhar, Amir Ali. Chemical composition of the essential oils of nutmeg and mace by GC-FID/MS indigenous to Pakistan and evaluation of their biological activities. *Latin American Journal of Pharmacy*, 2016 35(10): 2176-2184 **Impact factor: 0.290**
64. Muhammad Abdul Qadir, \***Mahmood Ahmed**, Muhmmad Imtiaz Shafiq, Amir Ali, Asma Sadiq. Analytical method for the identification and assay of kojic acid, methylparaben and propylparaben in cosmetic products using UPLC: Application of BS ISO 12787 standard. *Journal of AOAC International*, 99(5): 1191-1196 **Impact factor: 1.201**
65. Sheikh Asrar Ahmad, \***Mahmood Ahmed**, Muhammad Abdul Qadir, Muhmmad Imtiaz Shafiq, Yusra Safa, Nazish Awan, Shabnam Shahzad, Amir Ali, Momina Feroz, Zia Ullah Khokhar. Simultaneous determination of diloxanide furate, metronidazole benzoate, methyl paraben and propyl paraben by UPLC-DAD in pharmaceutical suspension. *Latin American Journal of Pharmacy*, 2016 35(7): 1626-1633 **Impact factor: 0.290**
66. Iftikhar-Ul-Haq, Muhammad Abdul Qadir, \***Mahmood Ahmed**, Muhammad Imtiaz Shafiq, Amir Ali, Abdul Samad. Effect of polyacrylamide gel electrolyte on the performance of lead acid battery. 2016 14(2): 783-788; [Scopus indexed](#)
67. Sheikh Asrar Ahmad, \***Mahmood Ahmed**, Muhammad Abdul Qadir, Muhmmad Imtiaz Shafiq, Nafeesa Batool, Nazra Nosheen, Muhammad Ahmad, Rana Khalid Mahmood, Zia Ullah Khokhar. Quantitation and risk assessment of chemical adulterants in milk using UHPLC coupled to photodiode array and differential refractive index detectors. *Food Analytical Methods*, 2016, 9(12): 3367-3376 **Impact factor: 2.413**
68. \***Mahmood Ahmed**, Anum Khaleeq, Rahila Huma, Muhammad Abdul Qadir, Muhammad Imtiaz Shafiq, Ayesha Israr, Amir Ali, Shabnam Shahzad. Optimization and validation procedure for elemental composition of fresh and pasteurized milk in Pakistan employing microwave digestion followed by ICP-OES: a contribution to risk assessment. *Food Analytical Methods*, 2016 9(10): 2933-2942 **Impact factor: 2.413**
69. **Mahmood Ahmed**, Muhammad Imtiaz Shafiq, Anum Khaleeq, Rahila Huma, Muhammad Abdul Qadir, Ayesha Khalid, Amir Ali, Abdul Samad, Physiochemical, biochemical, minerals content analysis and antioxidant potential of national and international honeys in Pakistan. *Journal of Chemistry*, 2016, Article ID 8072305, 10 pages; **Impact factor: 1.727**
70. Sumera Noreen, \***Mahmood Ahmed**, Muahmmad Abdul Qadir, Shabnam Shahzad, Muhammad Imtiaz Shafiq, Ahmad Mahmood Mumtaz, Amir Ali. Stability-indicating UPLC-PDA method for the determination of bambuterol hydrochloride: application to pharmaceutical dosage form and biological samples. *Latin American Journal of Pharmacy*, 2016 35(5): 937-44; **Impact factor: 0.290**
71. Muhammad Abdul Qadir, \***Mahmood Ahmed**, Muhammad Saqlain Tahir, Abdul Shakoor, Muhammad Imtiaz Shafiq, Shabnam Shahzad, Amir Ali. Sensitive and Selective UPLC method for simultaneous determination of methyl paraben, propyl paraben and loratadine in antihistamine suspension and biological samples: stability indicating assay. *Latin American Journal of Pharmacy*, 2016 35(5): 869-76; **Impact factor: 0.290**

72. Muhammad Abdul Qadir, \***Mahmood Ahmed**, Shabnam Shahzad, Muhmmad Imtiaz Shafiq, Syed Saleem Razzaq, Asad Gulzar, Amir Ali. Validated stability indicating RP-LC assay for determination of gatifloxacin and prednisolone acetate in ophthalmic preparations and biological samples. *Latin American Journal of Pharmacy*, 2016 35(5): 912-20; **Impact factor: 0.290**
73. Muhammad Abdul Qadir, \***Mahmood Ahmed**, Anum Khaleeq, Synthesis, antibacterial and antifungal possession of amino acids containing sulfonamide moieties, *Pakistan Journal of Pharmaceutical Sciences*, 2016 29(5): 1609-1613; **Impact factor: 0.596**
74. Shabnam Shahzad, Muhammad Abdul Qadir, Rashid Rasheed, **Mahmood Ahmed**, Muhammad Imtiaz shafiq, Sumera Noreen, Muhammad Javaid. A New Method for Synthesis of <sup>99m</sup>Tc-enrofloxacin: An Infection Imaging Agent. *Latin American Journal of Pharmacy*, 2016 35(2): 259-264; **Impact factor: 0.290**

## Year 2015

75. Amir Ali, \***Mahmood Ahmed**, Tariq Mahmud, Muhammad Abdul Qadir, Kashif Nadeem, Atif Saleem. Stability Indicating HPLC Method for Simultaneous Determination of Aminophylline and Chlorpheniramine Maleate in Pharmaceutical Formulations. *Indian Journal of Pharmaceutical Sciences*, 2015 77(5): 515-521; **Impact factor: 0.634**
76. Muhammad Abdul Qadir, \***Mahmood Ahmed**, Waseem Akhtar Hussain, Muhammad Saqlain Tahir. Development and validation of new HPLC method for simultaneous estimation of L-Lysine hydrochloride and L-Carnitine L-Tartrate in pharmaceutical dosage form. *Indian Journal of Pharmaceutical Sciences*, 2015 77(4): 434-438; **Impact factor: 0.634**
77. Sadia Ata, Feroza Hamid Wattoo, **Mahmood Ahmed**, Muhammad Hamid Sarwar Wattoo, Syed Ahmed Tirmizi, Abdul Wadood. A method optimization study for atomic absorption spectrophotometric determination of total zinc in insulin using direct aspiration technique. *Alexandria Journal of Medicine*, 2015 51: 19–23
78. Muhammad Abdul Qadir, \***Mahmood Ahmed**, Iftikhar-ul-Haq, Saghir Ahmad. Improved limit of detection and quantitation development and validation procedure for quantification of zinc in Insulin by atomic absorption spectrometry. *Pakistan Journal of Pharmaceutical Sciences*, 2015 28(3): 875-879; **Impact factor: 0.596**
79. Muhammad Abdul Qadir, \***Mahmood Ahmed**, Hina Aslam, Sadia Waseem, Muhammad Imtiaz Shafiq. Amidine sulfonamides and benzene sulfonamides: Synthesis and their biological evaluation. *Journal of Chemistry*, 2015, Article ID 524056, 8 pages; **Impact factor: 1.727**
80. Muhammad Abdul Qadir, \***Mahmood Ahmed**, Muhammad Imtiaz Shafiq, Nasir Mahmood, Sarosh Anwar, Tayyaba Habib, Sajilah Nosheen. Synthesis, spectral characterization and biological activities of methyl substituted amino acid conjugated sulfonamides. *Latin American Journal of Pharmacy*, 2015 34 (8): 1511-1515; **Impact factor: 0.290**
81. Shabnam Shahzad, Muhammad Abdul Qadir, \***Mahmood Ahmed**, Development of Stable Freeze Dried Kits of <sup>99m</sup>Tc-Ciprofloxacin for infection imaging. *Journal of the Chemical Society of Pakistan*, 2015 37(4): 643-648; **Impact factor: 0.393**
82. Muhammad Abdul Qadir, \***Mahmood Ahmed**, Rabia Waseem. Synthesis, antimicrobial and antifungal possessions of tramadol esters: In vitro studies. *Pakistan Journal of Pharmaceutical Sciences*, 2015 28(4): 1307-1310; **Impact factor: 0.596**
83. Muhammad Abdul Qadir, Shabnam Shahzad, Rashid Rasheed, **Mahmood Ahmed**, Shahzad Anwar, Syeda Kiran Shahzadi. A Novel Method for the Synthesis of <sup>99m</sup>Tc-Ofloxacin Kits Using D-Penicillamine as Coligand and Their Application as Infection Imaging Agent. *BioMed Research International* 2015, Article ID 502680, 8 pages; **Impact factor: 2.197**
84. Shabnam Shahzad, Muhammad Abdul Qadir, Rashid Rasheed, Shahzad Anwar, **Mahmood Ahmed**. In Vivo Studies <sup>99m</sup>Tc-Levofloxacin Freeze Dried Kits in Salmonella typhi, Pseudomonas aeruginosa, and Escherichia coli. *Latin American Journal of Pharmacy*, 2015 34(4): 760-65; **Impact factor: 0.290**
85. Muhammad Abdul Qadir, \***Mahmood Ahmed**, Anum Khaleeq. Synthesis and Biological Evaluation of Amino Terminal Modified New Sulfonamides of Contemporary Drugs. *Latin American Journal of Pharmacy*, 2015 34(4): 719-24; **Impact factor: 0.290**

86. Muhammad Abdul Qadir, \***Mahmood Ahmed**, Muhammad Iqbal, Synthesis, Characterization, and Antibacterial Activities of Novel Sulfonamides Derived through Condensation of Amino Group Containing Drugs, Amino Acids, and Their Analogs. BioMed Research International 2015, Article ID 938486, 7 pages; **Impact factor: 2.197**
87. Muhammad Abdul Qadir, \***Mahmood Ahmed**, Shabnam Shahzad. Determination of Aluminium by Electrothermal Atomization Atomic Absorption Spectrometry in Serum to Characterize Hemodialysis Toxicity. Analytical Letters, 2015 48 (1): 147-53; **Impact factor: 1.248**

#### **Year 2014**

88. Muhammad Abdul Qadir, \***Mahmood Ahmed**, Naveed-ul-Ihsan, Asrar Ahmad, Rabia Waseem. EDTA Chelated Micronutrients for Growth of Rice, Onion and Lemon Plants and Enhancing Their Fruit Yields. International Journal of Chemical Sciences, 2014 12 (4): 1153-1160; **Scopus indexed**
89. \***Mahmood Ahmed**, Muhammad Abdul Qadir, Malik Qaiser Hussain. Qualification of Atomic Absorption Spectrometer in Prospective View of Pharmaceutical Analysis. American Journal of Analytical Chemistry, 2014 5 (10): 674-680
90. Muhammad Abdul Qadir, \***Mahmood Ahmed**, Shoukat Hayat, Naveed-ul-Ihsan, Shabnam Shahzad, Saghir Ahmad. Synthesis of Quaternary Ammonium Compounds from Natural Materials. International Journal of Chemical Sciences, 2014 12 (3): 880-884; **Scopus indexed**
91. Muhammad Abdul Qadir, \***Mahmood Ahmed**, Asrar Ahmad, Sumaira Naz, Syed Azhar Ali Shah Tirmazi, Rukhsana Khan, Iftikhar Hussain, Rabia Waseem. Synthesis of Metal Complexes with Amino Acids for Animal Nutrition. Global Veterinaria. 2014 12 (6): 858-861
92. \***Mahmood Ahmed**, Anum Khaleeq, Saghir Ahmad. Antioxidant and Antifungal Activity of Aqueous and Organic Extracts of Liquorice. World Applied Sciences Journal, 2014 30 (11): 1664-1667; **Impact factor: 0.23**
93. Muhammad Abdul Qadir, \***Mahmood Ahmed**, Saghir Ahmed, Iftikhar-ul-Haq. Synthesis of dicalcium phosphate used as feed additive for animals from phosphate rock as potential cost-effective raw material. International Journal of Chemical Sciences, 2014 12(1): 111-120; **Scopus indexed**
94. \***Mahmood Ahmed**, Muhammad Abdul Qadir, Shabnam Shahzad, Rabia Waseem, Muhammad Saqlain Tahir. Validation of UV-HPLC method for simultaneous quantification of organic acids in disinfectants for haemodialysis machines. International Journal of Chemistry and Pharmaceutical Sciences, 2014 2(1): 536-540.

#### **Year 2013**

95. Muhammad Abdul Qadir, \***Mahmood Ahmed**. Organic acids effective antimicrobial agents against Escherichia coli, Staphylococcus aureus and Pseudomonas aeruginosa at ambient temperature. JPR: BioMedRx: An International Journal 2013 1(11): 983-987
96. \***Mahmood Ahmed**, Syeda Kiran Shahzadi, Rabia Waseem, Shabnam Shahzad, Waqar Ahmad. Sodium Benzoate and Potassium Sorbate in Pakistani Retail Foodstuffs. International Journal of Chemical Sciences and Research, 2013 3(6): 1-6