



Muhammad Zaman, Ph.D.

Work permit: Pakistani | **Place of birth:** Pakistan | **Nationality:** Pakistani | **Sex:** Male | **Phone:** (+92) 4235880007 (Work) | **Phone:** (+92) 3006095928 (Mobile) | **Phone:** (+92) 3336823913 (Home) | **Phone:** (+92) 534 (Ext) | **Email:** m.zaman2157@gmail.com | **Email:** dr.mzaman@ucp.edu.pk

ABOUT MYSELF

Current Position: Associate Professor
Institution: Faculty of Pharmaceutical Sciences, University of Central Punjab, Johar Town, Lahore, Punjab, Pakistan
A dedicated pharmacist and academician with comprehensive experience in pharmaceutical sciences, encompassing academia, research, and industry. Possesses specialized expertise in formulation development, dosage form design, drug delivery systems, and nanotechnology. Skilled in peptide synthesis, cell bioassays, and pharmacokinetic and pharmacodynamic evaluations using animal models. Demonstrates proficiency in pharmaceutical analysis and exhibits strong organizational, managerial, and team collaboration skills.

EDUCATION AND TRAINING

2018 Multan, Pakistan
DOCTOR OF PHILOSOPHY, PHARMACY (PHARMACEUTICS) Bahauddin Zakariya University Multan

2013 Faisalabad, Pakistan
MASTER OF PHILOSOPHY (PHARMACEUTICS) Government College University Faisalabad, Pakistan

2010 Sargodha, Pakistan
DOCTOR OF PHARMACY (PHARM.D) Faculty of Pharmacy, University of Sargodha, Sargodha, Pakistan

EXPERTIES

Key Competencies

- Expert in peptide synthesis
- Pharmacokinetics and pharmacodynamics studies using animal models
- Skills in formulation and dosage form development, nanotechnology, pharmaceutical technology, drug delivery and pharmaceutical analysis.
- Laboratory management and training of scholars
- Supervised and trained M.Phil and Ph.D students
- Teaching Graduate and Post Graduate-level courses in Pharmaceutics, Biopharmaceutics, Pharmaceutical Technology, Advanced Pharmaceutics and Research Methodology, Project writing and Seminars.

WORK EXPERIENCE

 **CHAPMAN UNIVERSITY IRVINE CALIFORNIA** – CALIFORNIA, UNITED STATES
Address Prof. K Parang lab, , California, United States

SHORT-TERM VISITING SCIENTIST – 08/2022 – 10/2022

- Conducted research project related to nanoparticle synthesis and their evaluation
- Peptides synthesis and their evaluation
- Biological and Cellular activities of anticancer drugs and peptides

 **RESEARCH AND DEVELOPMENT-PHARMACEUTICAL INDUSTRIES**
R&D CONSULTANT – 11/2021

- Development of New Pharmaceutical Dosage form
- Resolving the problems of existing formulations
- Resolving the stability issues of the products
- Pharmaceutical Analysis

 **UNIVERSITY OF CENTRAL PUNJAB, LAHORE-PAKISTAN** – LAHORE, PAKISTAN
ASSOCIATE PROFESSOR . FACULTY OF PHARMACEUTICAL SCIENCES – 11/2021 – CURRENT

Focal Person, Graduate Program to conduct and manage the program, member of graduate program committee, member of ethical review board, University of Central Punjab, member and focal person of curriculum review committee, coordinator of M.Phil and PhD admission and interview committee, post graduate research lab coordinator and member of academic council of UCP

Duties Performed;

- Managed the graduate program and admissions for graduate program
- Managing the post graduate research lab
- Purchased and manage the installation of lab facility equipment
- Revised the Curriculum & Conducted the of curriculum review meetings
- Organized the conferences and research seminars and workshops
- Taught undergraduate (Biopharmaceutics and Pharmaceutical Technology) and graduate students (Advanced Pharmaceutics and Research Methodology, Seminars and Project Writing)
- Supervised of M. Phil and PhD research students

 **UNIVERSITY OF CENTRAL PUNJAB, LAHORE-PAKISTAN** – LAHORE, PAKISTAN

ASSISTANT PROFESSOR , FACULTY OF PHARMACEUTICAL SCIENCES – 05/2019 – 11/2021

- Taught undergraduate (Biopharmaceutics and Pharmaceutical Technology) and graduate students (Advanced Pharmaceutics and Research Methodology, Seminars and Project Writing)
- Supervision of M. Phil Students

 **THE UNIVERSITY OF LAHORE, LAHORE-PAKISTAN** – LAHORE, PAKISTAN

ASSISTANT PROFESSOR, HEAD OF PHARMACEUTICS SECTION, FACULTY OF PHARMACY – 09/2015 – 04/2019

- Managed Pharmaceutics section (Head)
- Taught undergraduate (Quality Control, Pharmaceutical Dosage Form, Hospital Pharmacy, Pharmaceutical Technology), graduate and post graduate students (Advanced Pharmaceutics and Research Methodology, Seminars and Project Writing)
- Supervised M.Phil and Ph.D. students
- Member board of Studies and Board of Faculty

 **THE UNIVERSITY OF LAHORE, LAHORE-PAKISTAN** – LAHORE, PAKISTAN

LECTURER, FACULTY OF PHARMACY – 07/2011 – 09/2015

- Taught undergraduate students (Quality Control, Pharmaceutical Dosage Form, Hospital Pharmacy, Pharmaceutical Technology)
- Supervision of M. Phil

HONOURS AND AWARDS

Product development (Arthro-Sol) – NUST

- A project was presented at NUST in “Finding Innovative and Creative Solutions (FICS’23)”, under the title of “Product development (Arthro-Sol)” and won 2nd runner-up prize.

2023

Best Researcher and Innovator of University 2023 – University of Central Punjab,

Best Researcher and Innovator of University 2023” University of Central Punjab, Lahore Pakistan.

2023

Best Researcher and Innovator of University – University of Central Punjab

Best Researcher and Innovator of University 2023” University of Central Punjab, Lahore Pakistan.

REGISTRATION

Registered Pharmacist

- Registered with Pharmacy Council of Pakistan, as Registered Pharmacist, under registration number, “5910/10 A”

PROFESSIONAL WORKSHOPS

Professional Trainings, Workshops, and Certifications

- Attended the “Fundamental of Good Clinical Practices” on February 22, 2024. Organized by Faculty of Pharmaceutical Sciences, University of Central Punjab, Lahore
- Attended the training, “Suitable animal and Animal Model: Preventive and Curative Approaches” on January 9, 2024. Organized by Faculty of Pharmaceutical Sciences, University of Central Punjab, Lahore.
- Attended the training “Intellectual Property” August 23, to September 27, 2023. Organized by office of research, innovation and commercialization (ORIC), University of Central Punjab, Lahore
- Attending the training “Hazardous waste training” July, 26, 2022 at Chapman University Rinker Campus Irvine California, USA
- Attending the training “Introduction to laboratory safety Part-B” July, 27, 2022 at Chapman University Rinker Campus Irvine California, USA
- Attending the training “Introduction to laboratory safety Part-A” July, 26, 2022 at Chapman University Rinker Campus Irvine California, USA

- Attending the training “Chemical Storage and compatibility” July, 26, 2022 at Chapman University Rinker Campus Irvine California, USA
- Attended the training session on March, 04, 2022, the topic of training was, “Enhancing Research Productivity and Wining Research Grant” Organized by Center of Professional Excellence, University of Central Punjab, Lahore. The Trainer was Dr. Muhammad Ali Muhammad, Director (Policy, Research and Market Intelligence) at STZA.
- Attended the training session on March, 04, 2022, the topic of training was, “Developing industrial linkage” Organized by Center of Professional Excellence, University of Central Punjab, Lahore. The Trainer was Dr. Athar Mansoor, Director ORIC, University of Central Punjab, Lahore.
- Attended the training session on March, 03, 2022, the topic of training was, “Outcome based Education” Organized by Center of Professional Excellence, University of Central Punjab, Lahore. The Trainer was Dr. Gulraiz.
- Attended the training session on September 6-9, 2021, the topic of training was, “Teaching Excellence Program”, Organized and hosted by Center of Professional Excellence, University of Central Punjab, Lahore
- Participated in training workshop on, 26th and 27th November, 2016, entitled as, “Pharmacy Practice”, organized by Punjab Pharmacy Council.

RESEARCH SUPERVISOR AND PUBLICATIONS

Approved supervisor-II Ph.D. students by The University of Lahore, Lahore (Current)

- Farya Shabir
Development and Optimization of pH Responsive Nanocomposite Hydrogels For Oral Delivery of Insuline: In-vitro and in-vivo and Toxicological Evaluation
(Expected graduation 2024)
- Ahmad Kamal Aziz – Ph.D
Open label randomized Phase I & II Clinical study to assess the safety and efficacy of Iodine Complex (Renessans)
Graduated November 2023

Approved supervisor-II Ph.D. students by University of Sargodha (Graduated).

- Nariman Shahid – Ph.D.
Formulation and evaluation of thiomers based nanocomposite hydrogel for enhanced bioavailability of drug
Graduated June 2022
- Waqar Siddique—Ph. D.
Optimization of buccal drug delivery system for the enhanced therapeutic effects of anti-emetic and anti-migraine drugs
Graduated November 2022

Approved Supervisor-I, of M.Phil Students (Graduated Students)

1. Development and Evaluation of thermoresponsive Sol-gel for intranasal Delivery of Lamotrigine Maria Riaz 2023
2. Formulation and Characterization of Thermoresponsive drug delivery System for Delivery of Methotrexate and Folic Acid Nida Sohail 2023
3. Preparation and Evaluation of a Self-Emulsifying Drug Delivery System to Improve the Solubility and Permeability of Ticagrelor. Anam Aziz 2023
4. Formulation Development, and Evaluation of Modified Release Bilayer Tablets of Sitagliptin and Valsartan Muhammad Waqas 2023
5. Formulation, Evaluation, and Characterization of Fexofenadine IR and Paracetamol SR Multiparticulate Drug Delivery System Muhammad Sajid Nawaz 2023
6. Hypericin Loaded Nanocarrier for Nasal Drug Delivery: Formulation and Evaluation Muhammad Ahsan Waqar 2023
7. Development and Characterization of Micro-particulate Drug Delivery System of Favipiravir and Dexamethasone Zubia Abid 2022
8. Formulation and Evaluation of solid dispersion of Tacrolimus for Improved Dissolution Profile Nayab Ali 2022
9. Self-Emulsifying Drug Delivery System of Ticagrelor: Formulation and in-Vitro Evaluation Attiya Amir 2022
10. Formulation and Characterization of Ticagrelor Nanocrystal Tahira Fatima 2022
11. Development and Characterization of Hydrogel based Amoxicillin Patch for the Treatment of Skin Wounds Rana Talha Saleem 2022
12. Formulation and evaluation of chemically cross-linked hydrogel for control delivery of Clonidine Rizqa Abid 2022
13. Superabsorbent Tacrolimus loaded hydrogels: Preparation and Evaluation Mehreen Shahid 2022
14. Chitosans based Biodegradable Nanoparticles for effective Drug Delivery Muhammad Hammad Butt 2022
15. Design and Synthesis of Cationic Nano-carrier for Drug Delivery Iqra Azhar Mahboob 2022
16. Formulation and Characterization of Tri-Layered Tablets containing Empagliflozin and Atorvastatin as Immediate Release Layer and Metformin HCL as Extended-Release Layer Using Natural and Semi Synthetic Polymers Hafiz Umar Ali 2021
17. Study to improve dissolution profile of Tacrolimus tablets and its in-vitro bioavailability Saeeda Noreen 2021
18. Preparation of Ezetimibe hydrogel and its in-vitro evaluation. Rahima Khan 2021
19. Sequential release of Lansoprazole and Itopride from bilayer tablets; an in-vitro studies. Noor Shahzadi 2021
20. Formulation and in-vitro characterization of Tizanidine loaded nanoparticles. Nida Arshad 2021
21. Development of clonidine oral drug delivery system using linseed mucilage as pharmaceutical excipient. Maham Shabbir 2021
22. pH responsive smart drug delivery system for sitagliptin: an in-vitro evaluation. Faryal Bashir 2021
23. Solubility enhancement of Ticagrelor using different approaches. Saba Noureen Akram 2021
24. Hydrogel based nano-composite for the effective delivery of Favipiravir Arooj Khan 2021
25. Development of tamsulosin and finasteride bilayer tablet: A response surface methodology approach Muneeba Akhtar 2021
26. Preparation, Optimization and Characterization of Gastro-Retentive Tablets of Hyoscine Raazia Akhtar 2021

27. Application of Statistical Approach to Fabricate Instant Release of Films of Empagliflozin Nimrah Tabassum 2021
28. Formulation and characterization of Eletriptan buccal films Qurat ul Ain 2021
29. Preparation and characterization of Aceclofenac lipogel for topical application Mubeen Amjad 2021
30. Formulation and characterization of buccal film designed to deliver clonidine Khadeeja Asif 2021

CONTINUE

Approved Supervisor-I, of M.Phil Students (Graduated Students)

1. Synthesis and evaluation of polymeric nanocarriers loaded with Ticagrelor Farhan Haider 2020
2. Synthesis and characterization of Mucoadhesive polymer and its Application as drug carrier Rabia Imtiaz 2019
3. Development and optimization of pioglitazone nanostructured lipid carriers for improved solubility Sadaf Faiz 2019
4. Nanoparticulate carriers of Tacrolimus and Mycophenolate mofetil: development and evaluation studies Asma Iqbal 2019
5. Preparation of thiolated polymer and its use in the development of mucoadhesive drug delivery system Sadaf Saeed 2019
6. Synthesis, evaluation and optimization of atorvastatin calcium incorporated Nanostructured lipid carriers Sadia Imran 2019
7. Synthesis and Characterization of Nanoparticles as a Novel Drug Delivery System to Enhance the Bioavailability of Candidate Drug Yasmin Din 2018
8. Influence of Formulation Variables on the release profile of Buccal Films Ahsan Rasheed 2018
9. Fabrication and in-vitro evaluation of Floating Tablets Loaded with Loxoprofen Sodium Faiza Akhtar 2018
10. Application of statistical approach in design and optimization of Nanoparticulate carrier of Ondansetron Mehwish Alam 2017
11. Pharmaceutical wafers of rosuvastatin calcium and bisoprolol fumarate: Development and evaluation Nayab Sajid 2017
12. Formulation and in-vitro analysis of Gastro Retentive drug delivery system containing Timolol Maleate Muhammad Umer Javaid 2016
13. Fabrication and analysis of fast dissolving oral strips of Sumatriptan Succinate and Metochlopramide HCl for migraine and migraine associated Nausea and vomiting Rabia Hassan 2015
14. Development of ganciclovir gel and its permeation study in the presence of various permeation enhancers Waqar Siddique 2015
15. Formulation and invitro evaluation of microparticulate drug delivery system of tacrolimus Sundus Qureshi 2015
16. Formulation and development of transdermal patch containing Repaglinide and Remipril using different polymeric combinations Usman Khalid 2015

Co-Supervisor/Supervisor-II

1. Development and Evaluation of Betamethasone and Dexibuprofen Nanocrystals. Wahab Khalid 2023
2. Development and Characterization of Clindamycin Phosphate Loaded Hydrogel Based Topical Films Farhan Younis 2023
3. Solubility enhancement of Spironolactone and furosemide by Formulating in Ternary Solid Dispersion with adjuvant Carrier β -Cyclodextrin and pyridoxine HCl Muhammad Jawad 2023
4. Solubility Enhancement of Olmesartan Medoxomil and Manidipine HCl by Using Solid Dispersion Technique Usama Ahmed 2023
5. Mannose Anchored Thiolated Chitosan Stabilized Selenium Nanoparticles for Drug Delivery Applications Arooj Yousaf 2023
6. Formulation and In-vitro Evaluation of Ticagrelor and Aspirin Capsules by Solid Dispersion Technique Shahid Zulfiqar 2023
7. Preparation and In vitro Characterization of Self Nanoemulsifying Drug Delivery System of Tacrolimus Mustafa Khurram 2023
8. Formulation and Evaluation of Sol-gel Containing Terbinafine HCl Maryam Bajwa 2023
9. Mannosylated Thiolated Nanocarriers Containing Methotrexate Against Arthritis. Mahjabeen Akbar 2023
10. Fabrication and Characterization of Tacrolimus Loaded Transdermal Patches Ansa Abdul Razzaq 2023
11. Application of response surface methodology for the optimization of Pitavastatin loaded SLNs Nadia Hamid 2021
12. Preparation and evaluation of Mycophenolate Mofetil loaded solid dispersion: an in-vitro approach. Sara Munir 2021
13. Development of Tenofovir solid lipid nanoparticles to enhance its bioavailability. Maria Talat 2021
14. Pharmacist's role in Poisoning Management in A&E department of public sector hospitals of Lahore. Hina Shoukat 2021
15. Formulation & in-vitro characterization of kojic acid gel for hyper pigmentation. Sumiyya Javaid 2021
16. Formulation & in-vitro characterization of aloe vera gel with clindamycin for acne vulgaris. Tayyaba Rana 2021
17. Preparation and evaluation of Indomethacin loaded Solid Lipid Nanoparticles based gel for topical delivery. Zainab Naeem 2021
18. Application of response surface methodology for the optimization of Lovastatin loaded buccal films. Quratulain 2021
19. The Hepatocurative Effect of Arabinoxylan and Thiolated-Arabinosulfonamide on Hepatotoxicity Induced by Acetaminophen and 1,1'-Dimethyl-4,4'-Bipyridinium Dichloride Mohammed Tareq Ibrahim Abualshaikh 2019
20. Formulation development and in vitro characterization of single transdermal patch of Pregabalin and Ketoprofen Nida Shafeeq 2019
21. Optimization of Instant Release Polymeric Drug Delivery System of Rosuvastatin and Prindopril Sobia Anwar 2019
22. Simultaneous determination of Tizanidine HCl and Lornoxicam in Pharmaceutical Raw Material and its Application in Solid Dosage Form using RP-HPLC Umar Shokat 2019
23. Designing And Evaluation of Nano Drug Delivery System For Viral DNA Termination to Avoidance of ADRs Syeda Mehwish 2018
24. Evaluation of Rational Use of Filgrastim (Granulocyte Colony Stimulation Factor) in tertiary Cancer Care Setup Muhammad Rehan Khan 2017

Book Chapters

- Huma Hameed, Saleha Faheem, Zaman, M, Mahtab Ahmad Khan, Shazia Akram Ghumman, Hafiz Shoaib Sarwar and Asif Mahmood (2024). Multiomics approaches in cancer
- Huma Hameed, Zaman, M, Muhammad Ali Farooq, Abdullah Imran, Usman Zahid, Sidra Tul Muntaha and Rai Muhammad Sarfraz (2024). Multiomics in gastrointestinal disorders
- Fatima Tariq, Zaman M, Huma Hameed, Mahtab Ahmad Khan and Asif Mahmood (2024) Multiomics in respiratory disorders

- Mahmood, A., Ijaz, H., Sarfraz, R. M., Zafar, N., Zaman, M., & Azam, M. (2023). Polymeric Hydrogels and Nanogels: Classification, Development, and Pharmaceutical Applications.
- Zaman, M., Khan, R., Khan, A., Talat, M., Aman, W., & Farooq, U. (2022). Dual-responsive polymeric micelles for drug delivery. In *Polymeric Micelles for Drug Delivery* (pp. 429-447): Elsevier.
- Muhammad Zaman*, Zeeshan Danish, Mahtab Ahmad Khan, Hira Ijaz, Junaid Qureshi, Ghulam Razzaque; Comprehensive review on Buccal drug delivery system and Appraisal of Chitosan as Pharmaceutical and Biomedical Polymer, *Encyclopedia of Polymers, Polymeric Materials, and Polymer Technology*, 2022

PUBLICATIONS

Peer Reviewed Publications

1. Ayaz U, Zaman M, Hameed H, Naeem S, Noor Khan I, Ahsan Waqar M, Niaz S, Ereej N, Salawi A. DMARDS incorporated injectable hydrogels in cartilage tissue regeneration: a review. *Polymer-Plastics Technology and Materials*. 2024 Jun 6:1-8. (HEC Category, Y, IF 3)
2. Waqar MA, Zaman M, Shafeeq Ur Rahman M, Khan R, Majeed I. Navigating the Tumor Microenvironment: Mesenchymal Stem Cell-Mediated Delivery of Anticancer Agents. *Journal of Drug Targeting*. 2024 Apr 23(just-accepted):1-7. (HEC Category, W, IF 4.74)
3. Shabir F, Mahmood A, Zaman M, Sarfraz RM, Ijaz H, Ashraf MU, Gad HA. Novel insulin-montmorillonite sodium complex containing pH regulated nanocomposite hydrogels. *Journal of Drug Delivery Science and Technology*. 2024 May 1;95:105588. (HEC Category, W, IF 5.37)
4. Aziz A, Zaman M, Khan MA, Jamshaid T, Butt MH, Hameed H, Rahman MS, Shoaib QU. Preparation and Evaluation of a Self-Emulsifying Drug Delivery System for Improving the Solubility and Permeability of Ticagrelor. *ACS Omega*. 2024 Feb 21. (HEC Category, W, IF 4.1)
5. Ashfaq A, Riaz T, Waqar MA, Zaman M, Majeed I. A comprehensive review on transdermal patches as an efficient approach for the delivery of drug. *Polymer-Plastics Technology and Materials*. 2024 Feb 22:1-25. (HEC Category, Y, IF 3.0)
6. Akhtar M, Zaman M, Siddiqi AZ, Ali H, Khan R, Alvi MN, Butt MH, El-Demerdash FM, Sayed AA, Altyar AE, Abdel-Daim MM. Response Surface Methodology (RSM) approach to formulate and optimize the bilayer combination tablet of Tamsulosin and Finasteride. *Saudi Pharmaceutical Journal*. 2024 Jan 12:101957. (HEC Category_W, IF 4.562)
7. Abdul Razzaq A, Riaz T, Zaman M, Waqar MA, Ashfaq A. Recent advancements and various potential applications of transdermal patches. *International Journal of Polymeric Materials and Polymeric Biomaterials*. 2024 Jan 5:1-2. (HEC Category_X, IF 3.2)
8. Safhi AY, Siddique W, Zaman M, Sarfraz RM, Shafeeq Ur Rahman M, Mahmood A, Salawi A, Sabei FY, Alsali H, Zoghebi K. Statistically Optimized Polymeric Buccal Films of Eletriptan Hydrobromide and Itopride Hydrochloride: An In Vivo Pharmacokinetic Study. *Pharmaceuticals*. 2023 Nov 2;16(11):1551. (HEC Category_W, IF 4.6)
9. Iqbal S, Zaman M, Waqar MA, Sarwar HS, Jamshaid M. Vesicular approach of cubosomes, its components, preparation techniques, evaluation and their appraisal for targeting cancer cells. *Journal of Liposome Research*. 2023 Oct 23:1-7. (HEC Category_W, IF 4.4)
10. Munir M, Zaman M, Waqar MA, Khan MA, Alvi MN. Solid lipid nanoparticles: a versatile approach for controlled release and targeted drug delivery. *Journal of Liposome Research*. 2023 Oct 14:1-4. (HEC Category_W, IF 4.4)
11. Bajwa, M.; Tabassum, N.; Hameed, H.; Irfan, A.; Zaman, M.; Khan, M.A.; Mahboob, T.; Riaz, T.; Shazly, G.A.; Jordan, Y.A.B. Thermo-Responsive Sol-Gel-Based Nano-Carriers Containing Terbinafine HCl: Formulation, In Vitro and Ex Vivo Characterization, and Antifungal Activity. *Gels* 2023, 9,10. (HEC Category_X, IF 4.6)
12. Riaz, M.; Zaman, M.; Hameed, H.; Sarwar, H.S.; Khan, M.A.; Irfan, A.; Shazly, G.A.; Paiva-Santos, A.C.; Jordan, Y.A.B. Lamotrigine-Loaded Poloxamer-Based Thermo-Responsive Sol-Gel: Formulation, In Vitro Assessment, Ex Vivo Permeation, and Toxicology Study. *Gels* 2023, 9, 817. (HEC Category_X, IF 4.6)
13. Waqar, M. A., Zaman, M., Hameed, H., Jamshaid, M., Irfan, A., Shazly, G. A., ... & Bin Jordan, Y. A. (2023). Formulation, Characterization, and Evaluation of β -Cyclodextrin Functionalized Hypericin Loaded Nanocarriers. *ACS Omega*. (HEC Category_W, IF 4.12)
14. Ahmed, I., Mahmood, A., Qureshi, O. S., Sarfraz, R. M., Ijaz, H., Zaman, M., ... & Malook, M. (2023). Development of tamarind gum/ β -CD-co-poly (MAA) hydrogels for pH-driven controlled delivery of capecitabine. *Polymer Bulletin*, 1-33. (HEC Category_X, IF 2.8)
15. Younas, F., Zaman, M., Aman, W., Farooq, U., Raja, M. A. G., & Amjad, M. W. (2023). Thiolated Polymeric Hydrogels for Biomedical Applications: A review. *Current Pharmaceutical Design*. (HEC Category_X, IF 3.31)

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16. Mahmood, A., Ijaz, H., Sarfraz, R. M., Zafar, N., Zaman, M., & Azam, M. (2023). Polymeric Hydrogels and Nanogels: Classification, Development, and Pharmaceutical Applications.
17. Waqar, M. A., Zaman, M., Hameed, H., & Munir, M. (2023). ETHOSOMES: A NOVEL APPROACH FOR THE DELIVERY OF DRUG. *International Journal of Pharmacy & Integrated Health Sciences*, 4(2), 31-46. (HEC Category_Y)
18. Iqbal, Z., Rehman, K., Xia, J., Shabbir, M., Zaman, M., Liang, Y. and Duan, L., 2023. Biomaterial-assisted targeted and controlled delivery of CRISPR/Cas9 for Precise Gene Editing. *Biomaterials Science*. (HEC Category_W, IF 7.59)
19. Munir, M., Zaman, M., Waqar, M.A., Hameed, H. and Riaz, T., 2023. A comprehensive review on transethosomes as a novel vesicular approach for drug delivery through transdermal route. *Journal of Liposome Research*, pp.1-16. (HEC Category_W, IF 4.4)
20. Ijaz, H., Mahmood, A., Abdel-Daim, M. M., Sarfraz, R. M., Zaman, M., Zafar, N., ... & Benguerba, Y. (2023). Review on carbon nanotubes (CNTs) and their chemical and physical characteristics, with particular emphasis on potential applications in biomedicine. *Inorganic Chemistry Communications*, 111020. (HEC Category_X, IF 3.4)
21. Batool, N., Sarfraz, R.M., Mahmood, A., Rehman, U., Zaman, M., Akbar, S., Almasri, D.M. and Gad, H.A., 2023. Development and Evaluation of Cellulose Derivative and Pectin Based Swellable pH Responsive Hydrogel Network for Controlled Delivery of Cytarabine. *Gels*, 9(1), p.60. (HEC Category_X, IF 4.6)
22. Shabir, F., Mahmood, A., Zafar, N., Zaman, M., Sarfraz, R.M. and Ijaz, H., 2023. Novel Black Seed Polysaccharide Extract-g-Poly (Acrylate) pH-Responsive Hydrogel Nanocomposites for Safe Oral Insulin Delivery: Development, In Vitro, In Vivo and Toxicological Evaluation. *Pharmaceutics*, 15(1), p.62. (HEC Category_W, IF 5.4)
23. Waqar, M.A., Riaz, T., Zaman, M., Majeed, I., Alvi, M.N., Ishaque, A., Tabassam, N., Mehboob, T., Waqas, M., Munir, M. and Tayyab, S., 2022. Origin, Synthesis and Various Mechanisms of Hypericin as Antidepressant, Photosensitizer and Antiviral: Hypericin as Antidepressant, Photosensitizer and Antiviral. *Pakistan Journal of Health Sciences*, pp.07-12. (HEC Category_Y)

24. Siddique, W., Zaman, M., Waheed, S., Sarfraz, R.M., Bashir, S., Minhas, M.U., Farooq, U. and Saeed, A., 2022. Development and optimization of ganciclovir-loaded carbopol topical gel by response surface methodology for enhanced skin permeation. *Polymer Bulletin*, pp.1-28. (HEC Category_X, IF_2.8)
25. Zaman, M., Butt, M.H., Siddique, W., Iqbal, M.O., Nisar, N., Mumtaz, A., Nazeer, H.Y., Alshammari, A. and Riaz, M.S., 2022. Fabrication of PEGylated Chitosan Nanoparticles Containing Tenofovir Alafenamide: Synthesis and Characterization. *Molecules*, 27(23), p.8401. (HEC Category_W, IF_4.9)
26. Ain, Q.U., Zaman, M., Jamshaid, M., Riaz, T., Siddique, W., Shabbir, A., Butt, M.H. and Qureshi, O.S., 2022. Optimization and evaluation of instant release buccal films of eletriptan: a quality-by-design approach. *Polymer Bulletin*, pp.1-27. (HEC Category_X, IF_2.8)
27. Siddique, W., Zaman, M., Sarfraz, R.M., Butt, M.H., Rehman, A.U., Fassih, N., Albadrani, G.M., Bayram, R., Alfaifi, M.Y. and Abdel-Daim, M.M., 2022. The Development of Eletriptan Hydrobromide Immediate Release Buccal Films Using Central Composite Rotatable Design: An In Vivo and In Vitro Approach. *Polymers*, 14(19), p.3981. (HEC Category_W, IF_5.0)
28. Siddique, W., Sarfraz, R.M., Zaman, M., Khan, R., Gul, M., Asghar, F., Malik, T., Saif, A., Shamim, Q.U.A., Salawi, A. and Alshamrani, M., 2022. Method development and validation for simultaneous determination of Eletriptan hydrobromide and Itopride hydrochloride from fast dissolving buccal films by using RP-HPLC. *Acta Chromatographica*. (HEC Category_Y, IF_2.0)
29. Kamal, A., Mahmood, A., Zaman, M., Farooq, M., Nasir, B., Islam, N., Sarfraz, R.M., Zafar, N., Murtaza, G., Raheel, A.B. and Shahid, A., 2022. Evaluation of

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30. Siddique, W., Zaman, M., Khan, R., Butt, M.H., Muhammad, K., Salawi, A., Safhi, A.Y., Sabei, F.Y., ALSHAMRANI, M. and ALMOSHARI, Y., 2022. Formulation and Evaluation of Hydroxypropyl Methylcellulose Based Topical Gel Loaded with Ganciclovir. *Lat. Am. J. Pharm*, 41(10), pp.2096-2108. (HEC Category_Y, IF_0.2)
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32. Alshamrani M, Mubeen I, Iqbal MH, Farooq M, Zaman M, Chaudhry MA, Qureshi OS, Butt MH, Salawi A, Khan MR, Almoshari Y. Fast dissolving oral films: An approach to co-load and deliver the atorvastatin and ezetimibe for better therapeutic response. *Pakistan Journal of Pharmaceutical Sciences*. 2022, 35 (4): 1231-1241. (HEC Category_Y, IF_0.8)
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PROJECTS

Patent Applications

- Novel composition of Thermoresponsive intra-articular Injection containing Methotrexate, Folic Acid and Dexamethasone Sodium Phosphate
o (Application number: 740/2023)
- Novel Cardamom-Fennel Based Gummies for Muscle Spasm and Flatulence
o (Application number: 488/2023)
- Clove Oil-Based Gummies for Oral Thrush
o (Application number: 487/2023)
- Novel Composition of Chocolate Based Molded Tablets of Qust-e-Shireen
o (Application number: 486/2023)
- Pharmaceutical Capsule Formulation and Development with a Novel Composition
o (Application number: 776/2022)
- Pharmaceutical Tri-Layer Tablet Formulation and Development with a Novel Composition
o (Application number: 777/2022)
- Novel Clove Oil based Self-Emulsifying Drug Delivery System of Ticagrelor
o (Application number: 778/2022)
- Pharmaceutical Bilayer tablet formulation and Development with a Novel Composition
o (Application number: 991/2021)
- Linseed-g-AAm Hydrogel for Enhance Solubility and Sustained Release of Tacrolimus
o (Application number: 586/2020)
- Development of Sequential Release of Pitavastatin and Ezitimibe in the form of Bilayer Tablets
o (Application number: 587/2020)

CONFERENCES & SEMINARS

Conferences and Speaking Engagements (for oral presentations, invited speaker roles, guest lectures)

- 2nd National Pharmacy Scientific Conference and Poster Exhibition, Organized by Faculty of Pharmaceutical Sciences, University of Central Punjab, Lahore. November, 23, 2023 (Organizer)
- A digital event on, "Pain management and counselling: how can pharmacists support patients in achieving better quality of life" The International Pharmaceutical Federation, October 19, 2023. (Attendee)

- A webinar on, "Exploring the Intersection of AI, Human Computing, and Affective Computing: Applications, Challenges, and Future Directions" OIC Ministerial Standing Committee on Scientific and Technological Cooperation (COMSTECH), September 14, 2023. (Attendee)
- A Seminar on, "Navigating the Future of Medicine: Exploring Controlled Release Drug Delivery Systems", Riphah Institute of Pharmaceutical Sciences, Riphah International University, Lahore, May 21, 2023. (Guest Speaker)
- National Conference on, "Current Advancement in Pharmacy Profession: Theory to Practice" Organized by Faculty of Pharmacy, The University of Lahore, during April 2, 2022 (Invited Speaker)
- International Conference, "International Summit of Health Professional 2022", Organized by Faculty of Pharmacy, The University of Lahore, during December, 8-9, 2022. (Invited Speaker)
- International Workshop on Nanomedicine - Development and Challenges", organized by COMSTECH Secretariat, Islamabad, during March 15-17, 2021 (Attendee)
- Collaboration Among OIC Members Countries for Promotion of Research Culture in Medicines and Vaccines Through Strengthening and Upgrading the Clinical Trials; Organized by COMSTECH, Islamabad, during June 3, 2021 (Attendee)
- Virtual Seminar: "Organoid Culture Systems and Their Applications in Infectious Diseases" Stem Cell Technologies, June 8, 2020, Germany (Attendee)
- 2nd International Symposium on Pharmaceutical Sciences, organized by Faculty of Pharmaceutical Sciences, Government College University, Faisalabad-Pakistan in 2019 (Oral Presentation)
- International Conference on "Recent Advancement in Pharmaceutical Research and Drug Delivery" February 19-20, 2019 at Department of Pharmacy Quaid-i-Azam University, Islamabad (Oral Presentation)
- 7th Pak Pharma & Health Care Expo, Exhibition & Conference at Expo Center Lahore, Pakistan in 2018(Oral Presentation)
- International Pharmaceuticals Conference, exploring new avenues for Pharmacy Profession" organized by Faculty of Pharmacy, Bahauddin Zakariya University Multan, Pakistan in 2018 (Oral Presentation)
- 1st National Conference on Recent Advancements in Pharmaceutical Sciences, University of Sargodha (Oral Presentation)
- 3rd International Health Trigon Summit, "Inter Professional Cooperation in Pharmacotherapy" organized by Faculty of Pharmacy, The University of Lahore, Lahore-Pakistan in 2018 (Oral Presentation)
- "National Conference on Bioactivity of Phytochemicals (NCBP)" organized by The University of Lahore, Lahore at The University of Lahore in 2017.
- Eighteenth International conference and exhibition on, "Emerging Role of Pharmacist in Public Health" organized by Pakistan Pharmacist Association at Pearl Continental Hotel Lahore in May 2016 (Attendee)
- Workshop on, "Decreased morbidity and mortality due to Covid 19 pandemic in a BCG vaccinated Pakistani population; Implications for SARS COV2 vaccination strategies", COMSTECH Webinar series. May, 16, 2023 (Attendee)
- International conference and exhibition on, "Role of Pharmacist in Health System Strengthening" organized by Pakistan Pharmacist Association at Pearl Continental Hotel Lahore in May 2013 (Attendee)
- Attended "16th International Pharmacy Conference and exhibition on "Your Health and Pharmacist" organized by Pakistan Pharmacist Association at Pearl Continental Hotel Lahore in May 2011 (Attendee)