

GUL SHAHNAZ

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WEBSITES, PORTFOLIOS, PROFILES

<https://orcid.org/0000-0003-0736-2277>

<https://scholar.google.com.pk/citations?user=KaTRdF4AAAAJ&hl=en>

<https://www.adscientificindex.com/scientist/gul-shahnaz/353285>

<https://www.qau.edu.pk/profile.php?id=831008>

PROFESSIONAL SUMMARY

- Accomplished Formulation Research Scientist with over 10 years of experience leading the development of innovative drug delivery systems, including the creation of novel microneedle patches for melanoma treatment and advanced dry powder inhalers for multi-drug-resistant tuberculosis, resulting in successful preclinical outcomes and > 80 publications in high-impact journals.
- Expert in formulation design, process optimization, and scale-up for various drug delivery platforms, including nanocarriers, oral, inhalation, and transdermal systems, with a strong proficiency in utilizing advanced analytical techniques (HPLC, DSC, FTIR, DLS) to assess particle size, stability, release kinetics, and bioavailability.
- Proven track record in cross-functional team leadership, project management, and securing research funding, demonstrating excellent communication, collaboration, and time management skills to drive projects from concept to completion, meeting critical milestones and deadlines.

OBJECTIVE

- Dedicated and accomplished professional with extensive experience in pharmaceutical research and education, seeking a professor position in the field of Pharmacy.
- Seeking a challenging role as Director or Senior Scientist in multidisciplinary Formulation Sciences to leverage team leadership, strategic planning, and innovative drug development expertise.
- Open to part-time opportunities in Medical Writing or Communications, utilizing skills in clinical trial management, P/IND submissions, and scientific communication.

SKILLS

Dosage Form Research and Development, Leadership and Team Management, Project Management, Data Analysis, Scientific Communication, Regulatory Knowledge, Innovation and Problem Solving, Collaboration and Networking, Passion for Advancing Cancer and Antimicrobial Research

PROFESSIONAL EXPERIENCE

Tenured Professor Pharmacy, 09/2024 to Current
Quaid-i-Azam University – Islamabad, Pakistan

- Leading interdisciplinary research on AI-assisted design and evaluation of biologic nanocarriers for infectious diseases and immune disorders.
- Advancing novel drug delivery systems using multifunctional nanomaterials (e.g., liposomes, micelles, polymeric nanoparticles) for precision medicine.
- Building cross-sector collaborations with academia and industry to translate bench research into clinical applications.
- Mentoring junior researchers and graduate students in experimental design, data analysis, and publication strategy.
- Driving innovation in therapeutic delivery systems targeting tuberculosis, leishmaniasis, H. pylori, and cancer.
- Enhancing lab infrastructure and securing research funding through national and international grants.
- Promoting research ethics, lab safety, and regulatory compliance.
- Expanding public health impact by translating research outcomes into accessible clinical practices and contributing to health policy discussions.

Tenured Associate Professor Pharmacy, 10/2019 to 09/2024
Quaid-i-Azam University – Islamabad, Pakistan

- Directed research on formulation, synthesis, and in vitro/in vivo evaluation of drug delivery platforms for infectious diseases.
- Developed nanocarriers (e.g., liposomes, micelles, polymer-based systems) to improve drug solubility, stability, and bioavailability.
- Published in leading journals such as Frontiers in Public Health, BioNanoScience, and International Journal of Biological Macromolecules.

- Supervised postgraduate theses and coordinated multidisciplinary research teams.
- Managed research budgets and grant applications; secured funding from national and international agencies.
- Presented findings at national and international conferences to foster scientific exchange and collaboration. Contributed to teaching and curriculum development in pharmaceuticals, nanomedicine, and drug delivery.

Investigator-Formulation Science, 08/2022 to 06/2023

Inimmune – Missoula, MT, USA

Led the design and enhancement of adjuvant vaccine platforms, including emulsions, liposomes, and ionizable lipid nanoparticles (iLNPs), targeting intracellular STING, cell surface receptors, and endosomal TLR pathways.

Ensured compliance with GLPs, GMPs, cGXP, ICH guidelines, and USFDA regulations, effectively managing regulatory correspondence.

Collected, analyzed, and interpreted data and documentation related to nanoformulation investigations.

Represented the formulations function in cross-functional teams, building strong relationships with internal and external stakeholders.

Head of the Pharmacy Department, 02/2020 to 08/2022

Quaid-i-Azam University – Islamabad, Pakistan

- **Provided** visionary leadership, setting strategic goals and objectives for the department.
- **Oversaw** daily administrative operations, including budgeting and personnel management.
- **Ensured** effective delivery and continuous improvement of academic programs.
- **Collaborated** with faculty on curriculum development and review to meet accreditation standards and industry trends.
- **Facilitated** class scheduling and teaching assignments.
- **Fostered** a positive, collaborative academic environment.
- **Conducted** performance evaluations and provided feedback.
- **Oversaw** student admissions and welfare, addressing concerns and grievances.
- **Encouraged** student engagement in academic and extracurricular activities.
- **Promoted** collaboration with other departments, institutions, and industry partners.
- **Secured** research funding opportunities.
- **Ensured** compliance with accreditation standards and regulatory requirements.
- **Implemented** quality assurance measures for academic programs and research.
- **Developed** and implemented a strategic plan aligned with institutional goals.
- **Identified** emerging trends and opportunities in pharmacy education and research.
- **Upheld** ethical standards in research, teaching, and professional conduct.

Visiting Assistant Professor, 06/2017 to 09/2017

The Ohio State University, Columbus, OH– USA

- **Accumulated** data on transgenic *Leishmania donovani* parasites expressing red fluorescent protein DsRed2 by imaging-flow cytometry to investigate parasitic burdens inside bone marrow-derived macrophages ex vivo

Visiting Assistant Professor, 06/2015 to 09/2015

The University of Nebraska Medical Center, Omaha, NE– USA

- Development of long-acting nano-formulated anti-microbial therapy that facilitates clearance of parasites due to effective delivery to microbial sanctuaries

Assistant Professor Pharmacy (Tenure Track System), 01/2013 to 10/2019

Quaid-i-Azam University – Islamabad, Pakistan

- **Provided** expertise in formulation development and delivery of small organic compounds, peptides, and proteins via depot, oral, and pulmonary/nasal technologies.
- **Conducted** research to enhance drug solubility, permeation, and dissolution using novel particle engineering technologies and multifunctional excipients.
- **Applied** innovative teaching methods to achieve student learning objectives.
- **Created** materials and exercises to demonstrate drug delivery applications.

- **Facilitated** academic and community collaborations for research proposals to extramural funders.
- **Collaborated** on curriculum revision, course syllabi evaluation, and Pharmaceutical Technology lesson plans.

Education

Ph.D.: Pharmaceutical Technology, 03/2012

Leopold-Franzens-Universität Innsbruck - Innsbruck, Austria

Master of Science: Pharmaceutics, 01/2007

Islamia University Bahawalpur - Pakistan

Bachelor of Science: Pharmaceutical Sciences, 03/2005

Islamia University Bahawalpur – Pakistan

SKILL SET

Experimental Skills: Electron paramagnetic resonance (EPR), FTIR, Raman spectroscopy, Confocal microscopy, CVD, XRD, SEM, TEM, AFM, Zeta prob, DLS, UV/Vis, BET surface area analyzer, Tumor microenvironment research, Cell culture, Stem cell culture, Mammalian and human cell culture, Flow cytometry, Bioluminescence imaging, Optical imaging, Fluorescence and chemiluminescence spectroscopy, Photoluminescence spectrometry, In vivo testing, Conjugation, HPLC, LC-MS, NMR, IR, UV, Raman, Rheometer, Ussing-Chambr, Diffusion Chamber, Confocal laser scanning microscopy, Fluorescence imaging

Software: ChemDraw, Design Expert, Pk Fit

Project Management Skills: Project Design, Planning & Documentation, Engineering Budgeting, Scheduling and Cost Estimation, Team Coordination, and Supervision. Detail-oriented team player with strong organizational skills

Organizational: Ability to handle multiple projects simultaneously with a high degree of accuracy, Organized and dependable candidate successful at managing multiple priorities with a positive attitude, Willingness to take on added responsibilities to meet team goals

Computer Skills:

- **Linux based software;** Pymol, Gaussian View.
- **Windows-based software;** ACD NMR, Chemstation, Chem. Draw, Chem. Office, Chem. Sketch, Chemfinder, *Ms. Office*; Ms. World, Ms. Excell, Ms. Powerpoint, Ms. Publisher, etc.

ACCOMPLISHMENTS

Currently, I hold the position of Director of the Dosage Development Research Group, specializing in combating Infectious Diseases of Poverty (IDoP) and exploring the tumor microenvironment.

- Initiated and established the WHO-QAU Collaboration on the Antimicrobial Stewardship Program.
- Secured accreditation for the Professional Pharm.D. Evening Program from the Accreditation Council on Pharmacy Education.
- Provided effective supervision and mentorship to 08 Ph.D. students and 35 M.Phil students, emphasizing program-specific drug delivery.
- Ranked among the Top 2% of Scientists in a specific subject category according to the AD Scientific Index, both globally and nationally.
- Implemented an innovative combination of thiolation and mannosylation through EDAC/NHS chemistry, enhancing the effectiveness of antimicrobial agents.
- Successfully addressed solubility issues of Active Pharmaceutical Ingredients (APIs) by formulating multifunctional excipients within the laboratory facility.
- In 2014, I received the prestigious UNESCO-L'Oreal International Fellowship in recognition of groundbreaking work in nanotechnology aimed at addressing the challenge of drug resistance associated with traditional infectious disease therapies.
- Recognized with the Research Productivity Award for the years 2014/15 and 2016/17.
- Served as an assessor for Postdoctoral Fellowships Phase – III, Human Resource Development Division, Higher Education Commission, Pakistan.
- Contributed as a panel consultant for the Academics & Accreditation Division, Higher Education Commission, Islamabad.
- Actively participated as a member of the Curriculum Assessment Committee.
- Acknowledged as an expert in selected fields for diagnostics and treatment of Coronavirus by the Prime Minister's Task Force on Science & Technology.

Book Edited

Book Chapters

- 1) Riaz, S., Khizar, S., Ahmad, N.M., Shahnaz, G., Lebaz, N. and Elaissari, A. (2021). Magnetic Polymer Colloids for Ultrasensitive Molecular Imaging. In Magnetic Nanoparticles in Human Health and Medicine (eds C. Caizer and M. Rai)
- 2) Shahnaz, Gul, Hafiz Shoaib Sarwar and M Masoom Yasinza. "Crossing Biological Barriers for Leishmaniasis Therapy: From Nanomedicinal Targeting Perspective." *Leishmaniasis as Re-emerging Diseases* (2018): n. pag.
- 3) Kiani, Maria Hassan, M Masoom Yasinza and Gul Shahnaz. "Multifunctional Polymeric Enveloped Nanocarriers: Targeting Extracellular and Intracellular Barriers." *Molecular Insight of Drug Design* (2018): n. pag.

Editorial/Reviewer Services

- | | |
|---|--|
| 1. Nanomedicine | 2. Drug Development and Industrial Pharmacy |
| 3. AAPS PharmSciTech | 4. Biomaterials |
| 5. European Journal of Pharmaceutics and Biopharmaceutics | 6. Journal of Controlled Release |
| 7. International Journal of Pharmaceutics | 8. Medicina |
| 9. Journal of Drug Delivery Science and Technology | 10. Nanomaterials |
| 11. Journal of Materials Chemistry B | 12. Toxicology Research |
| 13. International Journal of Nanomedicine | 14. Journal of Colloid Science and Biotechnology |
| 15. Future Medicinal Chemistry | 16. Inorganica Chimica Acta |
| 17. Tropical Journal of Pharmaceutical Research | 18. Journal of Nanoparticle Research |
| 19. Archiv der Pharmazie | 20. Artificial Cells, Nanomedicine, and Biotechnology |
| 21. Scientific Reports | 22. DARU Journal of Pharmaceutical Sciences |
| 23. Chemical Biology & Drug Design | 24. Applied Nanoscience |
| 25. Free Radical Biology and Medicine | 26. European Journal of Pharmaceutical Sciences |
| 27. Carbohydrate Polymers | 28. Plos One |
| 29. Analytical Biochemistry | 30. Critical Reviews in Therapeutic Drug Carrier Systems |
| 31. Brazilian Journal of Pharmaceutical Sciences | 32. International Journal of Biological Macromolecules |
| 33. Journal of Molecular Structure | 34. Latin American Journal of Pharmacy |
| 35. Journal of Molecular Liquids | |

Affiliations/Membership/Certification

<p>Pakistan Pharmacy Council</p> <ul style="list-style-type: none"> · The L'Oréal-UNESCO For Women in Science · Pakistan Pharmaceutical Manufacturers' Association · The Pakistan Academy of Sciences <p>The Third World Academy of Sciences (TWAS)</p> <p>Member Department Purchase Committee (2012 to 2015)</p> <p>Member of Departmental Tenure Committee (2019 – Present)</p> <p>Member of Departmental Board of Study (2019 – Present)</p> <p>Member of Departmental Board of Faculty (2019 – Present)</p> <p>Member of Academic Council (2019 – Present)</p> <p>Member department Grievance Committee (2012 to date)</p> <p>Member of Department Fact Finding Committee</p> <p>Member Board of Studies, Riphia Institute of Pharmaceutical Sciences (2016-to date)</p>	<p>Member of Department Probe Threat Committee (2012 to date)</p> <p>Active participation in Pakistan Pharmaceutical Sector Assessment Survey-Level II and report writing</p> <p>Services to the executive committee, curriculum and research, and scholarly activity committee</p> <p>Member Attendance Committee</p> <p>Served as chair of the Department of Pharmacy, The University of Lahore, Islamabad Campus</p> <p>Dossier preparation for Pharmacy Council of Pakistan for Department Recognition</p> <p>MOU draft writing for various hospital affiliations with the Department</p> <p>Member department admission committee (2012 to date)</p> <p>Coordination of Conferences/Workshops (5 Workshops have been organized)</p> <p>Certified Registered Pharmacist</p> <p>Certified to conduct peer review for authoritative journals in the Formulation of Science</p> <p>World Health Organization (WHO) Training to measure transparency in the pharmaceutical sector - [4 weeks]</p>
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Selected Grants/Projects

1) Comparative Bioavailability & Pharmacokinetic Characterization

As the Principal Investigator, I led a cutting-edge research project exploring the potential of self-nanoemulsifying drug delivery systems (SNEDDS) to optimize the bioavailability and pharmacokinetics of phenothiazines. My role

encompassed designing and executing experiments, analyzing pharmacological data, and developing formulations to enhance drug solubility and absorption. The project significantly advanced the field of drug delivery, providing novel insights into improving therapeutic efficacy and reducing side effects of phenothiazine-based treatments. This innovative approach holds transformative potential for developing more efficient, patient-centric pharmaceutical therapies. **(Funded by the Higher Education Commission of Pakistan 2012)**

2) Monocyte-macrophage as targeted drug depots for long-acting anti-microbial medicines.

This project, which earned the prestigious UNESCO-L'Oréal competitive award, focuses on leveraging monocyte-macrophage cells as targeted drug depots for the development of long-acting anti-microbial medicines. The aim is to utilize the natural trafficking and phagocytic properties of monocytes and macrophages to deliver antimicrobial agents directly to infected tissues, providing sustained release and enhanced therapeutic effects. By utilizing these immune cells as drug carriers, the project offers a novel approach to combating infections, improving patient compliance, and reducing the need for frequent dosing. As the recipient of the internal UNESCO-L'Oréal award, I led the research efforts, securing funding, and guiding the project to successful completion. **(Funded by the UNESCO- L'Oréal 2014 to 2016)**

3) Development and evaluation of mannose-anchored thiolated nanocarriers for leishmaniasis therapy

The development of mannose-anchored thiolated nanocarriers aims to enhance leishmaniasis therapy by targeting CLR-type receptors on macrophages. The ligands, specifically designed to bind to C-type lectin receptors (CLRs), facilitate the targeted delivery of therapeutic agents directly to infected cells, overcoming the challenge of non-specific drug distribution. By using thiolated nanocarriers, the system ensures prolonged retention, enhanced cellular uptake, and controlled release of the drug. This receptor-targeted approach not only improves the therapeutic efficacy but also reduces systemic toxicity, offering a promising solution for more effective and safer treatments against leishmaniasis, which is notoriously difficult to treat with conventional therapies. **(Funded by the COMSTECH-TWAS 2016 to 2017)**

4) Synthesis and characterization of a disulfide cross-linked multifunctional in situ gelling cargo for oral peptide drug delivery

As Principal Investigator, I secured funding for the project focused on the synthesis and characterization of a disulfide cross-linked multifunctional in situ gelling cargo for oral peptide drug delivery. The aim was to enhance the stability, bioavailability, and controlled release of peptides, which are typically challenging for oral administration due to enzymatic degradation and poor absorption. By developing a disulfide cross-linked system, the project enables targeted and sustained delivery of peptides, improving therapeutic outcomes. This breakthrough in macromolecule-based drug delivery has significant potential in transforming peptide therapeutics, offering a non-invasive, effective alternative for treating a range of diseases. **(Funded by the Pakistan Academy of Sciences 2016-2018)**

5) Macrophage Targeted Thiolated Nanocarriers: Next Generation of Antimicrobial Drug Development

Through the funding of this project, we developed advanced lab facilities for the synthesis of thiolated nanocarriers targeting macrophages, addressing the growing issue of antimicrobial resistance to conventional antibiotics. These nanocarriers are engineered to enhance drug delivery, ensuring targeted release directly at infection sites, improving treatment efficacy, and reducing systemic side effects. This innovative approach opens new avenues for developing next-generation antimicrobial drugs. Additionally, several student theses were supported, fostering academic growth and research experience in nanomaterials and drug delivery systems. The project not only advanced scientific knowledge but also contributed to training the next generation of researchers in the field. **(Funded the Higher Education Commission of Pakistan 2017-2020)**

6) Microneedle patch precise for treatment of skin cancer: Melanoma

This novel formulation approach focuses on developing a microneedle patch for the precise treatment of skin cancer, specifically melanoma. The microneedle patch is designed to deliver therapeutic agents directly into the skin layers, enabling targeted drug delivery with minimal invasiveness. This approach enhances treatment efficacy while reducing systemic side effects, offering a promising alternative to traditional methods like injections or topical creams. As co-Principal Investigator, I contributed to the formulation design, optimized microneedle properties, and led preclinical evaluation studies. My role also involved coordinating research activities and ensuring the integration of cutting-edge technologies to improve melanoma treatment outcomes. **(Funded by the Higher Education Commission of Pakistan 2018 -2021)**

7) Novel thermoresponsive lipid nanoparticles (TLN) for combination thermotherapy and chemotherapy of cancer

This project focuses on developing novel thermoresponsive lipid nanoparticles (TLN) for combining thermotherapy and chemotherapy in cancer treatment. The TLN is designed to respond to localized temperature changes, enhancing the targeted delivery and controlled release of chemotherapeutic agents directly at tumor sites. By integrating thermoresponsive properties, these nanoparticles enable precise activation of the therapeutic payload, improving the efficacy of chemotherapy while minimizing off-target effects. The combination of hyperthermia and chemotherapy offers a synergistic approach to overcoming cancer resistance mechanisms, potentially revolutionizing cancer treatment with

enhanced therapeutic outcomes and reduced systemic toxicity. **(Funded by the Higher Education Commission of Pakistan 2022-2025)**

8) Exploring Dry Powders Inhaler in the Fight against Multi-Drug-Resistant Tuberculosis: Formulation Evaluation

The formulation development of dry powder inhalers (DPIs) aims to enhance drug delivery for combating multi-drug-resistant tuberculosis (MDR-TB). By optimizing the physicochemical properties of the powder, including particle size, flowability, and stability, the formulation ensures efficient aerosolization and deep lung deposition. The formulation is engineered to release high concentrations of antimicrobials directly to the site of infection, improving bioavailability and therapeutic outcomes. DPI technology minimizes systemic exposure, enhancing patient compliance and reducing side effects. This innovative approach presents a promising strategy to overcome MDR-TB, addressing a critical challenge in the global fight against resistant bacterial strains. **(Funded by the Pakistan Academy of Sciences 2024-2025)**

COURSES TAUGHT

Course Title	Credit Hours	No. of Students	PhD/M Phil/M. Sc.
Spring 2013			
PHM-306: Pharmaceutical Biochemistry-II (sec.-A & B)	6	60	Pharm-D
PHM-308: Pharmaceutical Biochemistry-II (sec.-A & B) Lab	2	60	Pharm-D
Fall- 2013			
PHM-305: Pharmaceutical Biochemistry-I (sec.-A & B)	6	60	Pharm-D
PHM-307: Pharmaceutical Biochemistry-I ((sec.-A & B) Lab	2	60	Pharm-D
PHM-761: Pharmacy Practice-I	1.5	30	M.phil
PHM-751: Pharmaceutics-I (Advanced Pharma & Biopharma)	1.5	45	M.phil/PhD
PHM-817: Pharma. Nanotechnology-I	1.5	31	M.phil/PhD
Spring 2014			
PHM-306: Pharmaceutical Biochemistry-II (sec.-A & B)	6	55	Pharm-D
PHM-308: Pharmaceutical Biochemistry-II (sec.-A & B) Lab	2	55	Pharm-D
PHM-815: Enhancement in Drug Delivery	3	20	M.phil/PhD
Fall 2014			
PHM-401: Pharmaceutical Preparation-I (sec.-A & B)	6	50	Pharm-D
PHM-403: Pharmaceutical Preparation-I (sec.-A & B) Lab	2	50	Pharm-D
Spring 2015			
During spring 2015, I was on Post-Doctoral Training at University of Nebraska Medical Center, Omaha, Nebraska, USA			
Fall 2015			
PHM-511: Pharma- Chemistry-II (Instrumentation)	3	60	Pharm-D
PHM-513: Pharma- Chemistry-II (Instrumentation) (sec.-A & B) Lab	2	60	Pharm-D
PHM-815: Enhancement in Drug Delivery	3	31	M.phil/PhD
Spring 2016			
PHM-325-A: Pharma, chem.-II B Bio chm	3	60	Pharm-D
PHM-341-A: Pharmaceutics-II B Theory	3	60	Pharm-D
PHM-342-A: Pharmaceutics-II B Laboratory	1	56	Pharm-D
PHM-837-A: Public health pharmacy	3	21	M.phil/PhD
Fall 2016			
PHM-314-A: Pharmaceutical Chm- II ABC Th	3	53	Pharm-D
PHM-315-A: Pharmaceutical chm- II A BC lab	1	53	Pharm-D
PHM-815-1: Enhancement in drug delivery	3	36	M.phil/PhD
Spring 2017			
PHM 325-A: Pharma.Chem-IIB Bio Chem	3	55	Pharm-D
PHM 602-A: Pharmaceutics VII	3	45	Pharm-D
PHM 743-A: Research planning & report writing	3	67	M.phil/PhD
Fall 2017			
PHM-314: Biochemistry-A	3	55	Pharm-D

PHM-410: Hospital Pharmacy-I	3	50	Pharm-D
PHM-842: Advance Preventive Pharmacy	3	12	M.phil/PhD
Spring 2018			
PHM-325-A: Pharma, chem.-II B Bio chm	3	60	Pharm-D
PHM-326-A: Pharma, chem.-II B Bio chm	1	60	Pharm-D
PHM-420-A: Hospital Pharmacy-I	3	55	Pharm-D
Fall 2018			
PHM 314-A: Pharmaceutical Chm-IIA BC Theory	3	54	Pharm-D
PHM 415-A: Pcutes-VA(Biopcutcs & pmcokin)Th	3	51	M.phil/PhD
PHM 416-A: Pcutes-VA(Biopcutcs & pmcokin) Lb	1	51	Pharm-D
Spring 2019			
PHM-325-A: Pharmaceutics-VB (B & P)Theory	3	56	Pharm-D
PHM-326-A: Pharmaceutics-VB (B & P) Lab	1	56	Pharm-D
PHM-837-A: Public Health Pharmacy	3	11	M.phil/PhD
Fall 2019			
PHM 314-A: Pharmaceutical Chm-IIA BC Theory	3	54	M.phil/PhD
PHM 415-A: Pcutes-VA(Biopcutcs & pmcokin)Th	3	55	Pharm-D
PHM 416-A: Pcutes-VA(Biopcutcs & pmcokin) Lb	1	55	Pharm-D
Spring 2020			
PHM-842: Advance Preventive Pharmacy	3	8	M.phil/PhD
PHM- 821: Advanced Nanomedecine	3	32	M.phil/PhD
Fall 2020			
PHM-837-A: Public Health Pharmacy	3	17	M.phil/PhD
PHM-815-1: Enhancement in drug delivery	3	38	M.phil/PhD
Spring 2021			
PHM 753: Formulation and Product Development	3	60	Pharm-D
PHM 834: Pharmacy Practice IV	3	20	M.phil/PhD
Fall 2021			
PHM-815: Enhancement of Drug Delivery	3	35	M.phil/PhD
PHM-847: Antimicrobial Stewardship	3	15	M.phil/PhD
Spring 2022			
PHM-848: Infectious disease prevention and control	3	10	M.phil/PhD
PHM-814: Polymers in Drug Delivery	3	25	M.phil/PhD
Fall 2022 - Spring 2023			
Inimmune Corp. Missoula, Montana, USA Formulation Investigator (Sabbatical Leave)			
Fall 2023			
PHM-741: Biostatistics	3	42	M.phil/PhD
PHM-350: Dispensing Pharmacy	3	52	Pharm-D
Spring 2024			
PHM-742: Biostatistics-II	3	40	M.phil/PhD
PHM-440: Pharmaceutical Technology-II	3	55	Pharm-D
Fall 2024			
PHM-741: Biostatistics-I	3	15	M.phil/PhD
PHM-430: Pharmaceutical Technology-I	3	43	Pharm-D

M. Phil/PhD Supervision (HEC Approved Supervisor)

M. Phil Supervision			
S.No	Student's Name	Thesis title	Year
1.	Fatima Balquis	Evaluating the Potential of Private Pharmacies to Circumvent the Tuberculosis Burden	2017
2.	Azhar Hussain Tahir	Exploration of health care professionals' involvement and attitudes toward alternative medicines	2017
3.	Rabia Arshad	Development and characterization of thiolated bandage for post-operative surgical site infections	2017
4.	Iqra Afzal	Targeted mannosylated nanoparticles for Paromomycin delivery in leishmaniasis therapy	2017
5.	Bushra Nawaz Cheema	Evaluation of wound vaccination services in community pharmacies	2017
6.	Sidra Butt	Comparative analysis for the effectiveness of combinatory antihypertensive therapy in clinical setting of Pakistan	2017

7.	Tehniat Zahra	Parental vaccine hesitancy as a barrier for immunization coverage rate	2017
8.	Beenish Ashfaq	Prevalence of airborne allergens in Pakistan and association of trigger factor with allergic diseases	2017
9.	Hajra Zafar	Amoxicillin loaded mucoadhesive thiomers based nanoparticles for <i>H.pylori</i> infection therapy	2017
10.	Iqra Chaudhery	Development of long-acting enema for intracolonic administration of vancomycin in lieu of pediatric infectious colitis therapy	2017
11.	Uswa Rasheed	Malnutrition in surgical patients: Evaluation of pre- and postoperative outcomes and effectiveness of nutritional screening tools	2018
12.	Sara Shahid	Impact of Educational Intervention regarding Metered Dose Inhaler Technique on Pharmacists and Asthma Patients	2018
13.	Asma kanwal	Formulation and evaluation of thiolated mucoadhesive composite polymeric periodontal membrane of doxycycline	2018
14.	Sundus Maria	Synthesis and characterization of nanoparticles based on preactivated thiolated chitosan for oral delivery of octreotide	2019
15.	Ayesha Batool	Formulation and evaluation of mucoadhesive self- nanoemulsifying drug delivery system (snedds) for tamoxifen	2019
16.	Muhammad Shakeel	Synthesis and evaluation of thiolated emulgel based silver nanoparticles for cutaneous leishmaniasis	2019
17.	Sumbal Sohail	Educational intervention for Tuberculosis Prevention by health belief model	2020
18.	Muska	Management of maternal antenatal associated insomnia and anxiety during pregnancy: pharmacist led implementation of cognitive behavioral therapy	2020
19.	Tania Mazhar	Mapping the potential of thiolated bandage against <i>Staphylococcus aureus</i> .	2020
20.	Ayesha bibi	Maternal iron deficiency anemia: impact of pharmacist-led intervention on hemoglobin level	2020
21.	Sidra Ashraf	Synthesis and evaluation of thiolated hyaluronic acid based transferosomes for umbilical cord infections	2021
22.	Aiman Qaisar	Synthesis and evaluation of thiolated hyaluronic acid and papain modified nanoparticles for treating <i>H.pylori</i>	2021
23.	Muhammad Zahoor	Formulation and evaluation of silver/chlorhexidine/chitosan nanocomposite as a modern wound dressing	2022
24.	Anam Arshad	Natural product-based Nano formulated surgical hands wash: For an enhanced antibacterial and antifungal activity.	2022
25.	Ramsha Khan	Design and synthesis of ciprofloxacin loaded stereocomplex polymeric nano micelles against proctitis	2022
26.	Syeda Ambreen	Safety of covid-19 vaccination in pregnancy and concern regarding vaccination safety among pregnant women.	2022
27.	Farheen	Development of L-arginin loaded muco penetrating ceftriaxone loaded oral formulation.	2023
28.	Rabia Saleem	Preparation and characterization of tretinoin loaded NLCs – based sunscreen.	2023
29.	Sanila kaleem	Formulation of thiolated haloronic acid nanoparticle for transmucosal ocular variconazole delivery	2023
30.	Rana Muhammad Awais Khan	Doxycycline and Azelaic Acid Co-Loaded Nanoemulgel for the treatment of Facial Rosacea: In Vitro and In Vivo Evaluation	2023
31.	Raana Gul Malik	Development of Tranexamic Acid Loaded Silver Nanoparticles as Topical Hemostatic Agent	2023
32.	IQRA YOUSAF	Optimization of Antifungal Topical Treatments: Ketoconazole and Selenium Nanoparticles in Polymeric Gel	2024
33.	SHAKEEL AHMAD	Nano-Engineered Cargo for Optimizing Oral Absorption of Tizanidine Nanostructured Lipid Carriers	2024
35.	ZEESHAN	Formulation and Development of Nano Carrier Loaded Medicated Wound Dressing	2024
PhD Supervision			

1.	Muhammad Farhan Sohail	Design, synthesis and characterization of targeted thiolated nanocargoes in cancer therapy	2017
2.	Hafiz Shoaib Sarwar	Formulation and Evaluation of Macrophage Targeted Thiolated Nanocarriers for the Enhanced Efficacy of <i>Anti-Leishmanial</i> Drugs	2019
3.	Rabia Arshad	Multi-functionalized SEDDS for mucosal and cellular trafficking against <i>Salmonella typhi</i>	2021
4.	Ayesha Rauf	Macrophage Targeted Thiolated Nanocarriers against Tuberculosis	2022
5.	Maria Hassan Kiani	Multi-functional polymeric micelles for targeted intracellular delivery of Rifampicin against Tuberculosis	2022
6.	Sobia Razzaq	Papain decorated multi-functional polymeric micelles for targeted intracellular delivery of Paclitaxel	2022

Conference Presentations

- 1) **Gul Shahnaz**, Glen Perera, Andreas Bernkop-Schnürch. The influence of efflux pumps on mucosal uptake of therapeutic peptides rich in hydrophobic amino acids, EuroNanoMedicine 2009, September 2009, Bled, Slovenia
- 2) **Gul Shahnaz**, Glen Perera, Andreas Bernkop-Schnürch. Synthesis, characterization, mucoadhesion and biocompatibility of thiolated carboxymethyl-dextran-cysteine conjugate, Annual Meeting CMBI, September 2009, Igls, Austria
- 3) Deni Rahmat, Duangkamon Sakloetsakun, **Gul Shahnaz**, Federica Sarti, Andreas Bernkop Schnürch. Enhanced transport of rhodamine 123 in presence of thiolated hydroxyethylcellulose in Caco-2 cells, 2nd Annual Meeting CMBI, September 2010, Igls, Austria
- 4) **Gul Shahnaz**, Deni Rahmat, Andreas Bernkop-Schnürch. Novel thiolated mucoadhesive nanoparticles: for sustained delivery and drug targeting, 2nd Annual Meeting CMBI, September 2010, Igls, Austria
- 5) Javed Iqbal, **Gul Shahnaz**, Andreas Bernkop-Schnürch. Enhanced oral bioavailability of paclitaxel in the presence of poly(acrylic acid)-cysteine conjugates, 6th Meeting of the Doctoral students from Innsbruck's Medical University and of the life sciences disciplines of the Leopold-Franzens Universität Innsbruck, November 24th, 2010, Austria
- 6) Deni Rahmat, Duangkamon Sakloetsakun, **Gul Shahnaz**, Federica Sarti, Andreas Bernkop Schnürch, The role of d-glucose units on the backbone of thiolated hydroxyethyl cellulose in permeation enhancing properties, 6th Meeting of the Doctoral students from Innsbruck's Medical University And of the life sciences disciplines of the Leopold-Franzens Universität Innsbruck, November 24th, 2010, Austria
- 7) **Gul Shahnaz**, Javed Iqbal, Andreas Bernkop-Schnürch Nasal Delivery Of Leuprolide Loaded Nanoparticles: Influence on ciliary beat frequency (cbf) of human nasal primary cell cultures, 6th Meeting of the Doctoral students from Innsbruck's Medical University And of the life sciences disciplines of the Leopold-Franzens Universität Innsbruck, November 24th, 2010, Austria
- 8) Deni Rahmat, **Gul Shahnaz**, Andreas Bernkop Schnürch. The application of thiolated hydroxyethylcellulose (hec) in cosmetic. International seminar on cosmetics: Recent development in cosmetics, Bandung, 26-27th November, Indonesia.
- 9) **Gul Shahnaz** and Andreas Bernkop Schnürch, Thiolated polymer conjugation with peptide drug: formulation, design and in vivo pharmacokinetic characterization, 3rd International Conference on Drug Discovery and Therapy (ICDDT), 7th - 10th February, 2011, Dubai, UAE.
- 10) Deni Rahmat, Jan Barthelmes, Christiane Müller, **Gul Shahnaz**, Andreas Bernkop-Schnürch, Modulation of disulfide bonds for design of a mucoadhesive nanoparticulate peptide/protein drugs delivery system, Joint Meeting of the Austrian and German Pharmaceutical Societies, University of Innsbruck, September 20th – 23rd, 2011, Austria
- 11) **Gul Shahnaz**, Javed Iqbal, Flavia Laffleur, Deni Rahmat, Andreas Bernkop-Schnürch, Sustained parenteral peptide delivery providing extended plasma half life, Joint Meeting of the Austrian and German Pharmaceutical Societies, University of Innsbruck, September 20th – 23rd, 2011, Austria
- 12) Javed Iqbal, **Gul Shahnaz**, Sarah Dünnhaupt, Christiane Müller, Andreas Bernkop-Schnürch, Mucoadhesive properties of novel preactivated poly(acrylates), Joint Meeting of the Austrian and German Pharmaceutical Societies, University of Innsbruck, September 20th – 23rd, 2011, Austria
- 13) Flavia Laffleur, Fabian Hintzen, **Gul Shahnaz**, Andreas Bernkop-Schnürch, Enzymatic degradation of thiolated chitosan, Joint Meeting of the Austrian and German Pharmaceutical Societies, University of Innsbruck, September 20th – 23rd, 2011, Austria
- 14) Deni Rahmat, **Gul Shahnaz**, Duangkamon Sakloetsakun, Glen Perera, Andreas Bernkop Schnürch, Chitosan-HIV 1 Tat peptide conjugate: Synergism with thiomers in enhanced gene transfection efficiency, 7th Meeting of the Doctoral students from Innsbruck's Medical University And of the life sciences disciplines of the Leopold-Franzens Universität Innsbruck, November 11th, 2011, Austria.

Conferences/Seminars/Workshops

- 1) Conference on "5th Annual Meeting Center for Molecular Biosciences (CMBI)" 26th – 27th 2008, Igls, Tyrol, Austria
- 2) Conference on "Life Science Meeting" 18th -19th September 2009, Igls, Tyrol, Austria
- 3) Conference on "EuroNanoMedicine" 28th – 30th September 2009, Bled, Slovenia

- 4) Conference on "6th Meeting of the Doctoral students from Innsbrucks Medical University and of the life sciences disciplines of the Leopold-Franzens Universitat Innsbruck" 24th November, 2010, Innsbruck, Austria
- 5) Conference on "2nd Annual Meeting for Life Sciences" 24th -25th 2010 September, Igls, Tyrol, Austria
- 6) Conference on "Joint Meeting of the Austrian and German Pharmaceutical Societies" 20th -23rd September, 2011, Innsbruck, Austria
- 7) Conference on "3rd International Conference on Drug Discovery and Therapy (ICDDT)" 7th -10th February 2011, Dubai, UAE
- 8) Conference on "7th Meeting of the Doctoral students from Innsbrucks Medical University and of the life sciences disciplines of the Leopold-Franzens Universitat Innsbruck" 11th November 2011, Innsbruck, Austria
- 9) 17th International Pharmacy Conference & Exhibition, 19th – 21th September 2012, Islamabad, Pakistan
- 10) Conference on "9th Biennial International Conference of Pakistan Society for Microbiology" Karachi 28th -31th January, 2013, Karachi, Pakistan
- 11) *Engaging Private Pharmacies in TB Care & Control - Training Workshop*, 15th July, 2013, Network of Development Professionals, Islamabad, Pakistan
- 12) 1st International conference on Drug Development- Natural & Synthetic, 25th - 27th August, 2013, Comsats-Abbottabad, Pakistan
- 13) International Symposium on *Nanomaterials*. "*Nanomaterials – Potential Applications & Challenges*, 31th October, 2013, *Lahore University of Management Sciences, Lahore, Pakistan*
- 14) 18th International Pharmacy Conference & Exhibition, 31th October 2nd November, 2013, Pakistan Pharmacist Association, Lahore, Pakistan.
- 15) Promoting Research and Publication in Pharmaceutical Policy and Practice 20th December 2013 Health Services Academy, Islamabad, Pakistan
- 16) Recent Advances in Nanotechnology, January 6, 2014, PINSAT, Preston University Islamabad
- 17) For Women in Science Week, 16th -20th March, 2014, UNESCO head office, Paris, France
- 18) Good Governance for Medicines (GGM), 21th – 23th April, World Health Organization Lahore, Pakistan
- 19) Pharmaceutical Sector Assessment Survey - Level II, 15th -17th September 2014, World Health Organization, Islamabad, Pakistan
- 20) 2nd International Workshop Pharmacy Practice/Clinical Pharmacy, 15th -19th December 2014, Quaid-i-Azam, Islamabad, Pakistan
- 21) Sixth Structural Biology & Molecular Biophysics Workshop, 9th July 2015, University of Nebraska Medical Center (UNMC), Durham Research Center, Omaha, USA
- 22) Seminar on Adventures in the Small World: A Novel Approach to Understanding Intracellular Events During HIV-1 Infection of the CNS, 17th July 2015, University of Nebraska Medical Center (UNMC), Eppley Science Hall, Omaha, USA
- 23) Seminar on Hybridtides and the Artisan Biology platform - Towards oral delivery and novel therapeutic mechanisms 28th July 2015, University of Nebraska Medical Center (UNMC), Durham Research Center, Omaha, USA
- 24) International Nanomedicines Symposium on Nanotheranostics, 26th November 2015, NORI, Islamabad
- 25) International Symposium, Nanomedicines: Development, Testing and Application Possibilities, 1st March 2016, NORI, Islamabad
- 26) ISESCO Women in Science Conference on Contributions of Pakistani Women in Scientific and Social Development 2, 8th March 2016, QAU, Islamabad
- 27) Regional Workshop On Biosafety and Biosecurity for Life Sciences Researchers, 26th -27th April, 2016 Pakistan Academy of Sciences, Islamabad
- 28) 3rd Conference on Frontiers of Nanoscience and Nanotechnology, 25th October 2016, PINSTECH, Islamabad.
- 29) 4th conference on Frontiers of Nanoscience and Nanotechnology, 12-13 December, 2017 PINSTECH, Islamabad
- 30) Research protocol development workshop for Implementation research, 9-12 May 2017 Health Services Academy, Islamabad
- 31) 2nd International Workshop on Experimental Biology-IWEB-2017 "Nanotheranostics: From Bench to Bedside and Beyond" 22-24 November 2017, NILOP, Islamabad
- 32) National Workshop "Nanomedicine; Advancements and Challenges in Pakistan" November 27-29, 2017 Department of Pharmacy, Quaid-i-Azam University, Islamabad
- 33) 1st Annual Health Research Conference on "Health Research- A Step towards Attaining SDGs 2030" Pakistan Health Research Council (PHRC), September 2018, Marriot Hotel, Islamabad
- 34) Regional conferences on reinforce the themes for young university lecturers and professors on counter-radicalization by The Center for Research and Security Studies, June 30, 2018 at Hill View Hotel, Islamabad.
- 35) 9th Annual Public Health Conference on Global Public Health: Thinking globally and acting Locally by Pakistan Health Services Academy, 4-5th December 2018, Islamabad
- 36) National Dialogue on Women in Science, organized by UNESCO in partnership with UNWOMEN, Pakistan Alliance for Maths and Science and Lahore College for Women University (LCWU), 11- 12 February 2019 at LCWU, Lahore
- 37) 3rd International Conference on "Recent Advancement in Pharmaceutical Research and Drug Delivery" February 19-20, 2019, QAU, Islamabad

- 38) International "One-Health Research Symposium" Pakistan Academy of Sciences, November 17, 2019
 - 39) International Conference and workshop on "Dengue Infection in Pakistan and its Controlling Strategies "organized by Department of Animal Sciences, QAU, 17-12- 2019 Venue Geo Auditorium QAU
 - 40) International Conference on Health and Migration by The Department of Sociology in collaboration with Edinburgh University, UK and International Centre for Migration Policy Development on 19th December 2019 in the Earth Sciences Auditorium
 - 41) World Antimicrobial Awareness Week (November 18-24th, 2020), QAU, Islamabad
 - 42) 6th International Conference on Public Health 2020, (ICOPH 2020), 09th – 11th July 2020, in Bangkok, Thailand
 - 43) Fourth International Conference on "Integrative multidisciplinary nanomedicine: a game changing strategy for emerging infectious disease, October 10, 2020,QAU
 - 44) Fighting Breast Cancer in a Developing Country: Insight from Pink Pakistan Trust's Technology driven Initiatives on March 8, 2021 at COMSTECH secretariat
 - 45) Launch of ISAAA Brief 55 and Seminar on "Science Communication and Public Engagement" on March 9, 2021 at COMSTECH secretariat
- Workshop on Nanomedicine – Development and Challenges from March 15 to March 17, 2021 at COMSTECH secretariat

PUBLICATIONS

List of Publications		
Authors/Title of Research Paper (Impact Factor ~350, Citation: 2556, h-index:32,i10-index 57)	Journal Name/ISSN Volume (Issue No): Page No (Year)	Category W/X/Y/Z (Impact Factor)
1. Saleem, Wajiha; Akhtar, Sohail; Jahan, Faryal; Ashraf, Sidra; Shahnaz, Gul; Rahdar, Abbas; Pandey, Sadanand. <i>Development of contact lenses loaded thiolated nanoparticles for ocular delivery of tobramycin.</i>	BioNanoScience , 2024, 14 (3), 2665–2677. Springer US.	W 2.2
2. Khan, Rana Muhammad Awais; Akhtar, Sohail; Edagwa, Benson J.; Shahnaz, Gul; Rehman, Shafique Ur; Rahdar, Abbas; Kharaba, Zelal. <i>Doxycycline monohydrate and azelaic acid co-loaded nanoemulgel for the treatment of facial rosacea: In vitro and in vivo evaluation.</i>	Journal of Drug Delivery Science and Technology , 2024, 98 , Article 105894. Elsevier.	W 2.8
3. Tahir, Azhar Hussain; Tanveer, Maria; Shahnaz, Gul; Saqlain, Muhammad; Ayub, Shagufta; Ahmed, Ali. <i>Knowledge, attitude, and perceptions of healthcare professionals towards complementary and alternative medicine: a cross-sectional survey from twin cities of Pakistan.</i>	BMC Complementary Medicine and Therapies , 2023, 23 (1), Article 432. BioMed Central London.	W 2.8
4. Azhar, Farah; Naureen, Humaira; Shahnaz, Gul; Hamdani, Syed Damin Abbas; Kiani, Maria Hassan; Khattak, Shahana; Manna, Manoj Kumar; Babar, Mustafeez Mujtaba; Rajadas, Jayakumar; Rahdar, Abbas. <i>Development of chitosan-based β-carotene mucoadhesive formulation for skin cancer treatment.</i>	International Journal of Biological Macromolecules , 2023, 253 , Article 126659. Elsevier.	W 8.2
5. Balquis F, Sohail MF, Hamid H, Ullah W, Khan AH, Shahnaz G. Potential and weak links in the management of tuberculosis by Pakistani private pharmacy staff.	Front Public Health . 2023 Mar 9;11:983997	W 5.18
6. Ahmed, N., Sohail, M.F., Khurshid, Z. <i>et al.</i> Synthesis, Characterization, and In Vivo Distribution of ^{99m} Tc Radiolabelled Docetaxel Loaded Folic Acid-Thiolated Chitosan Enveloped Liposomes.	BioNanoSci. 13 , 134–144 (2023).	W 3.63
7. Shakeel M, Kiani MH, Sarwar HS, Akhtar S, Rauf A, Ibrahim IM, Ajalli N, Shahnaz G, Rahdar A, Díez-Pascual AM. Emulgel-loaded mannosylated thiolated chitosan-coated silver nanoparticles for the treatment of cutaneous leishmaniasis..	Int J Biol Macromol. 2023 Feb 1;227:1293-1304	W 8.025
8. Zahra T, Shoaib Sarwar HS , Sarfraz M , Zaman M , Ahmad H, Jalil A, Shahnaz G, Sohail MF Thiomer coated solid lipid nanoparticles for the enhanced oral bioavailability of tacrolimus: in-vitro and in-vivo evaluation	J Drug Deliv Sci Technol ISSN:1773-2247	W 5.062

9. Kiani M., et. Al., Cholesterol decorated thiolated stereocomplexed nanomicelles for improved anti-mycobacterial potential via efflux pump and mycothione reductase inhibition	<i>J. Mol. Liq.</i> ISSN:0167-7322 2022	W 6.16
10. Qaisar A., Design and synthesis of multifunctional polymeric micelles for targeted delivery in Helicobacter pylori infection	<i>J. Mol. Liq.</i> ISSN:0167-7322 2022	W 6.16
11. Arshad R, Arshad MS, Tabish TA, Shah SNH, Afzal S, Shahnaz G. Amidated Pluronic Decorated Muco-Penetrating Self-Nano Emulsifying Drug Delivery System (SNEDDS) for Improved Anti-Salmonella typhi Potential.	Pharmaceutics. 2022 Nov 10;14(11):2433.	W 5.55
12. Jahan F, Zaman SU, Syed MA, Arshad R, Amjad O, Ali I, Gul R, Shahnaz G, Aamir MN, Hanif S. HPLC method development and validation for in vitro and in vivo quantification of vancomycin in rabbit plasma.	Pak J Pharm Sci. 2022 Nov;35(6(Special)):1683-1690.	W 0.79
13. Shahid S, Ahmed F, Shahnaz G, Saqlain M, Ans M, Sana A, et al. The Impact of Theoretical and Practical Guidance Regarding Metered dose Inhaler Technique on Asthma Patients. <i>J Young Pharm.</i> 2022;14(3):327-32	J Young Pharm. 2022;14(3):327-32	
14. Faiqa Nazir, Tanveer A. Tabish, Fatima Tariq, Shanza Iftikhar, Rijja Wasim, Gul Shahnaz, Stimuli-sensitive drug delivery systems for site-specific antibiotic release,	Drug Discovery Today, 6, 1698-1705, 2022	W 8.369
15. Javed QUA, Syed MA, Arshad R, Rahdar A, Irfan M, Raza SA, Shahnaz G, Hanif S, Díez-Pascual AM. Evaluation and Optimization of Prolonged Release Mucoadhesive Tablets of Dexamethasone for Wound Healing: In Vitro-In Vivo Profiling in Healthy Volunteers.	<i>Pharmaceutics</i> Apr 7;14(4):807 2022	W 6.525
16. Habib, R.; Azad, A.K.; Akhlaq, M.; Al-Joufi, F.A.; Shahnaz, G.; Mohamed, H.R.H.; Naeem, M.; Almalki, A.S.A.; Asghar, J.; Jalil, A.; Abdel-Daim, M.M. Thiolated Chitosan Microneedle Patch of Levosulpiride from Fabrication, Characterization to Bioavailability Enhancement Approach.	<i>Polymers</i> , 14, 415 2022	W 4.967
17. Razzaq, S.; Rauf, A.; Raza, A.; Akhtar, S.; Tabish, T.A.; Sandhu, M.A.; Zaman, M.; Ibrahim, I.M.; Shahnaz, G.; Rahdar, A.; Díez-Pascual, A.M. A Multifunctional Polymeric Micelle for Targeted Delivery of Paclitaxel by the Inhibition of the P-Glycoprotein Transporters.	<i>Nanomaterials</i> 11, 2858 2021	W 5.719
18. Design of Mannose-Coated Rifampicin Nanoparticles Modulating the Immune Response and Rifampicin Induced Hepatotoxicity with Improved Oral Drug Delivery. Rauf A, Tabish TA, Tehseen S, Sandhu MA, Pandey S, Shahnaz G, Rahdar A.	<i>Arab. J. Chem.</i> ISSN: 18785352 2021	W 5.16
19. Polyethylene imine conjugated supramolecular stereocomplexed nanomicelles for intracellular delivery of rifampicin against Mycobacterium bovis. Kiani MH, Ali S, Qadry A, Arshad R, Aslam A, Shahnaz G.	<i>Colloids Surf.</i> B0927-7765 2021	W 5.26
20. Papain decorated multi-functional polymeric micelles for the targeted intracellular delivery of paclitaxel. Razzaq S, Rauf A, Tabish TA, Raza A, Shahnaz G.	<i>Poly for adva. Tech.</i> ISSN:1099-1581 2021	W 3.66
21. A Hyaluronic Acid Functionalized Self-NanoEmulsifying Drug Delivery System (SNEDDS) for Enhancement in Ciprofloxacin Targeted Delivery against Intracellular Infection. Arshad R, Tabish TA, Kiani MH, Ibrahim MI, Shahnaz G, Rahdar A, Kang M, Pandey S	<i>Nanomaterials</i> ISSN: 1743-5889 May;14(4):387- 406, (2021)	W 5.06
22. Development of poly-L-lysine multi-functionalized muco-penetrating self-emulsifying drug delivery system (SEDSS) for improved solubilization and targeted delivery of ciprofloxacin against intracellular Salmonella typhi. Arshad A, Tabish TA, Naseem AA, Hassan AB, Hussain I, Hussain Shahzad, Shahnaz G.	<i>J. Mol. Liq.</i> ISSN:0167-7322 2021	W 6.16
23. Enhanced solubility and biopharmaceutical performance of atorvastatin and metformin via electrospun polyvinylpyrrolidone-hyaluronic acid composite nanoparticles. Iqbal R, Yousaf MA, Sohail MF, Rehman M, Hussain SZ, Huma Z, Shahnaz G, Quereshi OS, Shahnaz G. 3.	<i>Eur. J. Pharm. Sci.</i> ISSN:0928-0987 2021	W 3.616
24. A review of nanomaterial use for the diagnosis and therapy of Salmonella typhi. Arshad R, Paul K, Sabir F, Rahdar A, Bilal M, Shahnaz G, Kyzas	<i>J. Mol. Struct.</i> ISSN:0022-2860 2021	W 3.16

25. Mapping the potential of thiolated pluronic based nanomicelles for the safe and targeted delivery of vancomycin against staphylococcal blepharitis. Jahan F, Zaman S, Arshad R, Tabish TA, Shahnaz G	<i>J Drug Deliv Sci Technol</i> ISSN:1773-2247	W 3.96
26. Investigating the intracellular bactericidal effects of rifampicin loaded S-protected thiomeric chitosan nanocargoes against Mycobacterium tuberculosis. Rauf A, Razzaq S, Tabish TA, Tehseen S, Sandhu MA, Shahnaz G.	<i>J Drug Deliv Sci Technol</i> ISSN:1773-2247 2020	W 3.96
27. Fabrication and optimization of PH sensitive mannose anchored nano vehicle as a promising approach for macrophage uptake. Mukhtar A, Zeeshan M, Khan S, Shahnaz G, Khan SA, Sarwar HS, Pasha RA, Ali H	<i>Applied nanoscience</i> ISSN: 1388-0764 2020	X 3.6 6
28. Green synthesized selenium doped zinc oxide nano antibiotics synthesis characterization and evaluation of antimicrobial nanotoxicity and teratogenicity potential. Sohail MF, Rehman M, Hussain SZ, Huma Z, Shahnaz G, Quereshi OS, Khalid Q, Hussain	<i>J. Mater. Chem. B</i> ISBN:2050-750X	W 4.889
29. Green Synthesis of Zinc Oxide Nanoparticles by Neem Extract as Multi-facet Therapeutic Agents. Sohail MF, Rehman M, Hussain SZ, Huma Z, Shahnaz G, Quereshi OS, Khalid Q, Hussain I	<i>J Drug Deliv Sci Technol</i> ISSN:1773-2247 2020	W 6.3
30. Amphotericin B Loaded Polymeric Nanoparticles for Treatment of Leishmania Infections. Saqib M, Bhatti S, Ahmad N, Ahmed N, Shahnaz G, Lebaz N	<i>Nanomaterials</i> ISSN: 1743-5889 Feb;14(4):387-406, (2020)	W 3.96
31. Oral delivery and enhanced efficacy of antimonial drug through macrophage-guided multifunctional nanocargoes against visceral Leishmaniasis. Sarwar HS, Varikuti S, Sohail M, F, Sarwar M, Satoskar AR, Shahnaz G.	<i>Eur J Pharm Biopharm.</i> 79(1):171-80	W 5.0 6
32. Synthesis and characterization of pre-activated thiolated chitosan nanoparticles for oral delivery of octreotide. Maria S, Sarwar HS, Sohail MF, Imran M, Salman O, Ahmad N, Iqbal A, Shahnaz G.	<i>J Drug Deliv Sci Technol</i> ISSN:1773-2247 2020	W 4.604
33. Multi-functionalized nanocarriers targeting bacterial reservoirs to overcome challenges of multi drug-resistance. Kiani MH, Imran M, Raza A, Shahnaz G	<i>DARU J. Pharm. Sci</i> ISSN:1773-2247 2020	W 3.96
34. Formulation and evaluation of hyaluronic acid-based mucoadhesive self nanoemulsifying drug delivery system (SNEDDS) of tamoxifen for targeting breast cancer. Batool, A., Arshad Khan, R., Razzaq, S., Nousheen, K., Kiani, M., & Shahnaz, G.	<i>Int. J. Biol. Macromol.</i> ISSN:1773-2247 2020	W 3.117
35. Fabrication and Characterization of Thiolated Chitosan Microneedle Patch for Transdermal Delivery of Tacrolimus Ahmad Z, Khan MA, Siddiqui MI, Sarwar HS, Sohail MF, Rehman M, Hussain I, Shahnaz G,	<i>AAPS PharmSciTech.</i> ISSN: 1530-9932 7;21(2):60. 2020	W 3.2
36. Design of enzyme decorated mucopermeating nanocarriers for eradication of H. pylori infection, Zafar H, Kiani MH, Raza F, Rauf A, Chaudhery I, Ahmad NM, Akhtar S, Shahnaz G,	<i>J. Nanoparticle Res.</i> ISSN: 1388-0764 2020	W 2
37. Development and Characterization of Bioadhesive Film Embedded with Lignocaine and Calcium Fluoride Nanoparticles. Ghafar H, Khan MI, Sarwar HS, Yaqoob S, Hussain SZ, Tariq I, Madni AU, Shahnaz G, Sohail MF	<i>AAPS PharmSciTech.</i> ISSN: 1530-9932 7;21(2):60. 2020	W 3.2
38. Formulation and Evaluation of Novel Thiolated Intra Pocket Periodontal Composite Membrane of Doxycycline. Kanwal A, Iqbal A, Arshad R, Akhtar S, Razzaq S, Ahmad NM, Naz H, Shahnaz G.	<i>AAPS PharmSciTech.</i> ISSN: 1530-9932 28;20(8):325. 2019	W 3.2
39. Development and Evaluation of Optimized Thiolated Chitosan Proniosomal Gel Containing Duloxetine for Intranasal Delivery. khatoun M, Sohail MF, Shahnaz G, Rehman F, Din FU, Rehman Au.	<i>AAPS PharmSciTech.</i> ISSN: 1530-9932 18(4):1043-1055. 2019	W 3.2
40. ZnO-NPs embedded biodegradable thiolated bandage for postoperative surgical site infection: in vitro and in vivo evaluation. Arshad R, Sohail MF, Sarwar HS, Saeed H, Ali I, Akhtar S, Hussain SZ, Afzal A, Jehan J, Rehman A and Shahnaz G.	<i>PLOS ONE</i> ISSN: 1932-6203 (2019)	3.2
41. Drug Delivery System (SNEDDS) for Improved Oral Bioavailability of	<i>Medicina (Kaunas).</i>	W

Chlorpromazine: In Vitro and In Vivo Evaluation Baloch J, Sohail MF, Sarwar HS, Kiani MH, Khan GM, Jahan S, Rafay M, Chaudhry MT, Yasinza M, Shahnaz G. Self-Nanoemulsifying.	ISSN: 1010-660X May 24;55(5). (2019)	2.43
42. Mannosylated thiolated paromomycin-loaded PLGA nanoparticles for the oral therapy of visceral leishmaniasis. Afzal I, Sarwar HS, Sohail MF, Varikuti S, Jahan S, Akhtar S, Yasinza M, Satoskar AR, Shahnaz G.	Nanomedicine (Lond). ISSN: 1743-5889 Feb;14(4):387-406 (2019)	W 5.3
43. Folate-Functionalized Thiomeric Nanoparticles for Enhanced Docetaxel Cytotoxicity and Improved Oral Bioavailability Sajjad M, Khan MI, Naveed S, Ijaz S, Qureshi OS, Raza SA, Shahnaz G, Sohail MF..	AAPS PharmSciTech. ISSN: 1530-9932 Jan 15;20(2):81. (2019)	W 3.2
44. Evaluation of Turmeric Nanoparticles as Anti-Gout Agent: Modernization of a Traditional Drug Kiyani MM, Sohail MF, Shahnaz G, Rehman H, Akhtar MF, Nawaz I, Mahmood T, Manzoor M, Bokhari SAI. .	Medicina (Kaunas). ISSN: 1010-660X Jan 11;55(1) (2019)	W 2.43
45. Polymeric nanocapsules embedded with ultra-small silver nanoclusters for synergistic pharmacology and improved oral delivery of Docetaxel Sohail MF, Hussain SZ, Saeed H, Javed I, Sarwar HS, Nadhman A, Huma ZE, Rehman M, Jahan S, Hussain I, Shahnaz G..	Sci Rep. ISSN: 2045-2322. Sep 6;8(1):13304. (2018)	W 4.6
46. Advancements in the oral delivery of Docetaxel: challenges, current state-of-the-art and future trends.Sohail MF, Rehman M, Sarwar HS, Naveed S, Salman O, Bukhari NI, Hussain I, Webster TJ, Shahnaz G.	Int J Nanomedicine. ISSN: 1178-2013 Jun 8;13:3145-3161 (2018)	W 6.4
47. Design of mannosylated oral amphotericin B nanoformulation: efficacy and safety in visceral leishmaniasis.Sarwar HS, Sohail MF, Saljoughian N, Rehman AU, Akhtar S, Nadhman A, Yasinza M, Gendelman HE, Satoskar AR, Shahnaz G.	Artif Cells Nanomed Biotechnol. ISSN: 21691401 Jan 31;1-11. (2018)	W 5.6
48. Mannosylated thiolated polyethylenimine nanoparticles for the enhanced efficacy of antimonial drug against Leishmaniasis. Sarwar HS, Ashraf S, Akhtar S, Sohail MF, Hussain SZ, Rafay M, Yasinza M, Hussain I, Shahnaz G.	Nanomedicine (Lond). ISSN: 1743-5889 Jan;13(1):25-41 (2018)	W 4.727
49. Biosynthesized colloidal silver and gold nanoparticles as emerging leishmanicidal agents: an insight. Ovais M, Nadhman A, Khalil AT, Raza A, Khuda F, Sohail MF, Islam NU, Sarwar HS, Shahnaz G , Ahmad I, Saravanan M, Shinwari ZK.	Nanomedicine (Lond). ISSN: 1743-5889 12(24):2807-2819. (2017)	W 4.727
50. Redox biology of Leishmania and macrophage targeted nanoparticles for therapy Sarwar HS, Akhtar S, Sohail MF, Naveed Z, Rafay M, Nadhman A, Yasinza M, Shahnaz G.	Nanomedicine (Lond). 12(14):1713-1725 (2017)	W 4.727
51. Cell to rodent: toxicological profiling of folate grafted thiomers enveloped nanoliposomes, Sohail MF, Sarwar HS, Javed I, Nadhman A, Hussain SZ, Saeed H, Raza A, Bukhari NI, Hussain I, Shahnaz G	Toxicol. Res. ISSN:19768257 6, 814-821 (2017)	W 1.969
52. Development of mannose-anchored thiolated amphotericin B nanocarriers for treatment of visceral leishmaniasis Shahnaz G , Edagwa BJ, McMillan J, Akhtar S, Raza A, Qureshi NA, Yasinza M, Gendelman HE..	Nanomedicine (Lond). 12(2):99-115. (2017)	W 4.727
53. Formulation and in Vitro Characterization of Thiolated Buccoadhesive Film of Fluconazole Naz K, Shahnaz G , Ahmed N, Qureshi NA, Sarwar HS, Imran M, Khan GM..	AAPS PharmSciTech. ISSN: 1530-9932 18(4):1043-1055. (2017)	W 2.451
54. In-vitro antileishmanial potential of peptide drug hirudin.Khan H, Nadhman A, Azam SS, Anees M, Khan I, Ullah I, Sohail MF, Shahnaz G , Yasinza M.	Chem Biol Drug Des. ISSN: 1747-0285 89(1):67-73. (2017)	W 2.39
55. Rise of single organopathy theory from ayurveda system- a short report from pakistan's perspective.wjps Tahir AH, Tanveer M, Ahmed A, Arshad A, Shahnaz G. 2016	World J Pharma 5(12):12-19 (2016)	
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