

Dr. SHUJAAT AHMAD

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<https://scholar.google.com/citations?user=fHOPtooAAAAJ>

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EXPERIENCE

2023-Till Date	Chairman of department of Pharmacy, Shaheed Benazir Bhutto University, Sheringal, Dir (U). Pakistan.
2022-2023	Post Doctorate, Institute of Food Science and technology, CAAS, Beijing, China.
2021-2023	Director Administration, Shaheed Benazir Bhutto University, Sheringal, Dir (U). Pakistan.
2018-Till Date	In-charge Centralized Research Lab (CRL), Shaheed Benazir Bhutto University, Sheringal, Dir (U). Pakistan.
2018-2021	Chief Proctor, Shaheed Benazir Bhutto University, Sheringal, Dir (U). Pakistan.
2018-2020	Head of department of Pharmacy, Shaheed Benazir Bhutto University, Sheringal, Dir (U). Pakistan.
2010- 2015	Lecturer Department of Pharmacy, Shaheed Benazir Bhutto University, Sheringal, Dir (U). Pakistan.
2010- 2012	Head of Department of Pharmacy, Shaheed Benazir Bhutto University, Sheringal, Dir (U). Pakistan.
2007-2009	Research Fellow, Sheringal High Altitude Research Centre and Campus, Sheringal, Dir (U). Pakistan.
2006-2007	Production Pharmacist Lowit Pharma, Industrial Estate Hayatabad Peshawar. Pakistan.

Qualifications

2023	Post Doctorate , Institute of food Science and technology, CAAS, Beijing, China.
2017	M.Phil. leading to Ph.D. (Organic/Natural Product Chemistry), University of Malakand, Pakistan.
2008	PharmD (Condensed), University of Malakand, Pakistan.
2006	B. Pharm , University of Malakand, Pakistan.

Skills

- NMR Spectroscopy interpretation skill for both 1D and 2D NMR spectra.
- Infra-Red (I.R) and Ultra Violet (UV) Spectroscopy, Mass Spectrometry (interpretation)
- Chromatographic techniques (CC, VLC, FCC, TLC, PTLC, HPLC).
- Power Lab, Kymograph, Tissue Organ Bath, Rotary Evaporator.
- Biological Activities (Antibacterial, Antifungal, Antiviral, Anticancer, Antioxidant, etc.).
- Enzymes inhibitory Assays (Cholinesterase, Glycosidases, Urease etc).
- Write-up experience (original/review articles, reports, editing and power point presentations etc.

RESEARCH INTERESTS

- Phytochemical investigation of medicinal plants especially poisonous plants of *Aconitum* and *Delphinium* genus which are rich sources of diterpenoid alkaloids via isolation, purification and characterization of pure compounds and their Pharmacological activities.
- Exploring the medicinal importance of local medicinal plants of Dir Kohistan via isolation, purification and characterization of pure compounds and their Pharmacological activities.
- Green synthesis and characterization of metallic nanoparticles from local medicinal plants of Dir Kohistan and their Pharmacological activities.

MEMBERSHIP

- World Federation of Chinese Medicine Societies. (2022 till date)
- Member University Syndicate SBBU Sheringal. (2024-2027)
- Research Fellow INTI International University, Malaysia (15 Oct 2023 till date).
- World Federation of Chinese Medicine Societies. (2023-2025)
- Member University Syndicate SBBU Sheringal. (2021-2023)
- Member University Advance Studies and Research Board SBBU Sheringal. (2021-2023)
- Convener University research Ethical Committee SBBU Sheringal. (2018-2023)
- Member Board of Studies Department of Pharmacy SBBU Sheringal. (2014-2023)
- Member Academic Council SBBU Sheringal. (2012-2015)
- Member Finance and Planning Committee SBBU Sheringal. (2012-2015)
- Member Board of Governors Siraj Shaheed Hospital Batkhela. (2015-2024)
- Member Board of Governors InfoWorld College of Technology Batkhela. (2021-2024)

Journal referee/ Reviewer

- Antibiotics, Applied Sciences, Biomedicines, Cells, Molecules, Pharmaceuticals, MDPI (International Journal)
- Journal of Enzyme Inhibition and Medicinal Chemistry. (International Journal)
- Metabolic Brain Diseases Springer. (International Journal)
- Reviver Journal of Phytochemistry Elsevier. (International Journal).
- Reviver Journal of Rubber Research Springer (International Journal).
- Reviver Journal of Applied Water Science Springer (International Journal).
- Reviver Journal of Irish Journal of Medical Science Springer (International Journal).
- Reviver Journal of Food Hydrocolloids Elsevier (International Journal).
- Frontiers in Pharmacology Frontiers Media SA (International Journal).
- Reviver Journal of Applied Water Science Springer (International Journal).
- Reviver Journal of Current Functional Foods, Bentham Science Publishers. (International Journal).

Research Projects

- Project, worth 2.8 million, under NRPU-2021 program. Reference number HEC/R&D/RGA/NRPU/2021/15908. (P-I). **Completed**

CONFERENCES/ SYMPOSIUMS/Workshops/Trainings

- **Participated in** National Conference on Plant Sciences and Climate Change (PSCC), organized by HEC, at SBBU, Sheringal (07 to 10 August 2023)
- **Participated in** 1st National Conference on Recent Innovations in medicinal Chemistry and Biochemistry, Held in UST, Bannu. February 20-22,2018.
- **Focal person/Chief organizer** 1st National Conference on Phytomedicines: Current and Future Perspectives, organized by HEC, at SBBU, Sheringal (09 to 11 October 2018)
- **Participated** in the training entitled “English for Academia” organized by HEC, at SBBU, Sheringal (17 to 21 April 2017).
- **Participated in two days Bio risk Management refresher** Training by Relief International at SBBU, Sheringal, Dir Upper. March 30-31, 2021.
- **Participated in** 1st National Conference on Recent Innovations in medicinal Chemistry and Biochemistry, Held in UST, Bannu. February 20-22,2018.
- **Focal Person** Two days’ workshop on High Performance Liquid Chromatography (HPLC), Department of Pharmacy SBBU. Aug 30-31, 2015.
- **Focal Person / Trainer** Two days’ workshop on Power Lab, Department of Pharmacy SBBU. Oct 12-13, 2015.
- **Participated** in Workshop on Quantitative data analysis techniques by Dept. of Management Sciences, SBBU. Oct 27-28, 2015.
- **Participated** in “Two days’ workshop on quantitative data analysis using SPSS & AMOS” organized by Higher Education Commission, Islamabad at SBBU, Sheringal (29 &30 July 2015)
- **Participated in 27th National and 15th International Chemistry Conference** by University of Malakand and HEC under the auspices of Chemical Society of Pakistan. Aug 22-26,2016.

- **Participated** in the 1st National symposium on “OLD PLANTS, NEW REMEDIES 2008” at University of Malakand, sponsored by **HEC**, Islamabad.

REFERENCES

Prof. Dr. Waqar Ahmad Chairman Department of Pharmacy, University of Malakand, Chakdara, Dir (Lower), Khyber Pakhtunkhwa, Pakistan.

Cell: 0092-343-9773006

Email: waqar75@hotmail.com

Prof. Dr. Manzoor Ahmad Chairman department of Chemistry, University of Malakand, Chakdara Dir (Lower), Khyber Pakhtunkhwa Pakistan (**Ph.D Supervisor**)

Cell: 0092-3333586144

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LIST OF PUBLICATIONS

Total Publications Published= 81

Impact Factor= 300+

Research Interest Score= 1271

Citation Index=2280

H-index= 20 i10-index= 38

PhD Students Supervised= 06

M.S Students Supervised=05

Post doctorate student supervision= 01 (Jiang Wang from China).

1. Exploring the Carbonic Anhydrase II Inhibition, Molecular Docking and DFT Calculations of Bis-Schiff Bases of 4-Nitoacetophenone.**2025. ChemistrySelect.**
2. The cost-efficient techniques to evaluate the age-based structural heterogeneity and morphological analysis of multicellular tumor spheroids. **2025. Pakistan Journal of Pharmaceutical Sciences.**
3. Conventional and Emerging Drug Targeting Sites in Alzheimer's Disease and the Role of Translational Informatics in its Diagnosis and Management.
2025. Current Neuropharmacology.
4. Optimized Silver Nanostructures for Enhanced Antibacterial Potential: Recent Trends and Challenges in the Development of Metallo-antimicrobials. **2025.Chemical Engineering Journal.**
5. Bleeding Events Associated with Rivaroxaban Therapy in Naive Patients with Nonvalvular Atrial Fibrillation: A Longitudinal Study from a Genetic Perspective with INR Follow-Up.
2024.Medicina.
6. Exploring the potential of high hydrostatic pressure and ionic polysaccharides in improving interfacial stability of sweet potato protein hydrolysates emulsions.
2024. International Journal of Food Science and Technology.
7. Recent Advancements and Unexplored Biomedical Applications of Green Synthesized Ag and Au Nanoparticles: A Review. **2024. International Journal of Nanomedicine.**
8. Beneficial Effects of Natural Alkaloids from *Berberis glaucocarpa* as Antidiabetic Agents: An *In Vitro*, *In Silico*, and *In Vivo* Approach. **2024. ACS Omega.**
9. Investigating Novel Thiophene Carbaldehyde Based Thiazole Derivatives as Potential Hits for Diabetic Management: Synthesis, *In Vitro* and *In Silico* Approach. **2024. ChemistrySelect.**
10. Green synthesis of Gold and Silver Nanoparticles Using Crude Extract of *Aconitum violaceum* and Evaluation of their Antibacterial, Antioxidant and 3 Photocatalytic Activities.
2024. Frontiers in biology and Biotechnology.

11. Synthesis and analysis of Silica Nanocarriers for Pectinase Immobilization: Enhancing Enzymatic Stability for continuous Industrial Applications. **2023. Heliyon.**
12. Title Green synthesis of low-glycaemic Amylose-Lipid Nanocomposites by high-speed homogenization and formulation into nanocomposite hydrogel. **2023.Molecules.**
13. Advancements and Challenges in Phytochemical-mediated Silver Nanoparticles for Food Packaging: Recent Review. **2023. Trends in Food Science and Technology.**
14. Pitavastatin and Lovastatin exhibits calcium channel blocking which potentiates activity of Amlodipine as Vasorelaxant: A new futuristic dimension in Statin's pleiotropy. **2023.Medicina.**
15. Fungal communities, nutritional, physiological and sensory characteristics of sweet potato under three Chinese representative storages. **2023. Postharvest Biology and Technology.**
16. Efficient photodegradation of methyl red dye by Kaolin clay supported zinc oxide nanoparticles with their antibacterial and antioxidant activities. **2023. Heliyon.**
17. Rosuvastatin and Simvastatin potentiate antihypertensive effect of amlodipine through vasorelaxation phenomenon. **2023.Pakistan Journal of Pharmaceutical Sciences.**
18. Atorvastatin and fluvastatin potentiate blood pressure lowering effect of amlodipine through vasorelaxant phenomenon. **2023 Medicina.**
19. Morphology-controllable Bimetallic Gold Nanostructures for Mercury Detection: Recent Developments, Challenges and Prospects. **2023.Arabian Journal of Chemistry.**
20. PEGylated graphene oxide as nano drug delivery vehicle for podophyllotoxin (GO/PEG/PTOX) and in vitro -amylase/-glucosidase inhibition activities. **2023.ACS Omega.**
21. Photodegradation of Orange II dye using p-n junction NiO/TiO₂ composite, and Assessment of its biological activities. **2023.Arabian Journal of Chemical Society.**
22. Investigation of the photocatalytic and biological applications of iron oxide–indium oxide nanocomposite. **2023. Chemical Papers.**
23. The Effects of Moxifloxacin and Gemifloxacin on the ECG Morphology in Healthy Volunteers: A Phase 1 Randomized Clinical Trial. **2023.Diagnostics.**
24. Fabrication, characterization, process investigation and optimization of experimental conditions for the production of Indomethacin nanocrystals using microfluidic channel reactor. **2023. Pakistan Journal Of Pharmaceutical Sciences.**
25. Development of Pectinase Based Nanocatalyst by Immobilization of Pectinase on Magnetic Iron Oxide Nanoparticles Using Glutaraldehyde as Crosslinking Agent. **2023. Molecules.**

26. The Effect of Mineral Ions Present in Tap Water on Photodegradation of Organic Pollutants: Future Perspectives. **2023. Water.**
27. Molecular Mimicry Analyses Unveiled the Human Herpes Simplex and Poxvirus Epitopes as Possible Candidates to Incite Autoimmunity. **2022.Pathogens.**
28. New acetylcholinesterase inhibitors isolated from *Delphinium uncinatum*. **2022.Arabian Journal of Chemistry.**
29. Synthetic Mono-Carbonyl Curcumin Analogues Attenuate Oxidative Stress in Mouse Models. **2022.Biomedicines.**
30. A study on green synthesis, characterization of chromium oxide nanoparticles and their enzyme inhibitory potential. **2022.Frontiers in Pharmacology.**
31. Phytochemical Profiling, Antioxidant, Antimicrobial and Cholinesterase Inhibitory Effects of Essential Oils Isolated from the Leaves of *Artemisia scoparia* and *Artemisia absinthium*. **2022.Pharmaceuticals.**
32. Anti-Alzheimer and Antioxidant Effects of *Nelumbo nucifera*. L Alkaloids, Nuciferine and Norcoclaurine in Alloxan-Induced Diabetic Albino Rats. **2022.Pharmaceuticals.**
33. Investigation of Antistress and Antidepressant Activities of Synthetic Curcumin Analogues: Behavioral and Biomarker Approach. **2022.Biomedicines.**
34. Isolation, crystal structure, DFT calculation and molecular docking of uncinatine-A isolated from *Delphinium uncinatum*. **2022.Fitoterepia.**
35. In Vitro and In Silico Investigation of Diterpenoid Alkaloids Isolated from *Delphinium chitralense*. **2022.Molecules.**
36. Effects of pH and Ionic Salts on the Emulsifying and Rheological Properties of Acorn Protein Isolate. **2022.Molecules.**
37. Bio-Oriented Synthesis of Novel (S)-Flurbiprofen Clubbed Hydrazone Schiff's Bases for Diabetic Management: In Vitro and In Silico Studies. **2022.Pharmaceuticals.**
38. Attenuation of Scopolamine-Induced Amnesia via Cholinergic Modulation in Mice by Synthetic Curcumin Analogs. **2022.Molecules.**
39. Green Synthesis of Gold Nanoparticles Using *Delphinium Chitralense* Tuber Extracts, their Characterization and Enzyme Inhibitory Potential. **2021. Brazilian Journal of Biology.**

40. Anti-amnesic potential of synthetic curcumin analogues using scopolamine induce amnesic model via cholinergic system: A molecular docking-based approaches. **2021. Molecules.**
41. Insulinotropic Potential of Moxifloxacin and Gemifloxacin. **2021 Antibiotics.**
42. Review on Methylene Blue: Its Properties, Uses, Toxicity and Photodegradation. **2022. Water.**
43. Neuroprotective potential of synthetic mono-carbonyl curcumin analogs assessed by molecular docking studies. 2021. **Molecules.**
44. Antidiarrheal and antispasmodic activities of Trillium govanianum rhizome extract: involvement of calcium channel blockade. **2021. Natural Product Research.**
45. Estimation of Various Physicochemical Properties of Walnut Oil from Different Areas of Northern Kpk, Pakistan. **2021 Journal of the Mexican Chemical Society.**
46. Moxifloxacin and Gemifloxacin mediates its antispasmodic profile via ATP-Sensitive potassium channels: An in-Vitro bioassay study. **2021. Pakistan Journal of Pharmaceutical Sciences.**
47. Glycogen Synthase Kinase-3 (GSK-3) a magic enzyme: its role in diabetes mellitus and glucose homeostasis, interactions with fluroquionlones, a mini-review. **2021. Brazilian Journal of Biology.**
48. Green synthesis, characterization and Cholinesterase Inhibitory Potential of Gold Nanoparticles. **2021. Journal of the Mexican Chemical Society.**
49. The avenue of fruit wastes to worth for synthesis of silver and gold nanoparticles and their antimicrobial application against foodborne pathogens: A review. **2021. Food Chemistry.**
50. Antimicrobial and Antioxidant Role of the Aerial Parts of Aconitum violaceum. **2021. Journal of the Mexican Chemical Society.**
51. Moxifloxacin hypoglycaemic effect via interactions with glycogen synthase kinase-3 enzyme: A Molecular Dock based approach. **2021. Bioscience Research.**
52. Potential role of synthetic curcumin analogs as antibacterial, antioxidant and anticancer agent. **2021. Bioscience Research.**
53. Green production and structural evaluation of maize starch fatty acid complexes through high speed homogenization. **2020 Journal of Polymers and Environment.**
54. Smart nanocrystals of Indomethacin: Nanonization and characterization through top down method of media milling. **2020. Pakistan Journal of Pharmaceutical Sciences.**
55. Enhanced dissolution rate of Ketoprofen by fabricating into small nanocrystals. **2020. Pakistan Journal of Pharmaceutical Sciences.**
56. Effect of protein and oil volume concentrations on emulsifying properties of acorn protein isolate.

2020. Food Chemistry.

57. Prevalence of Acute and Chronic Forms of Leukemia in Various Regions of Khyber Pakhtunkhwa, Pakistan: Needs Much More to be done. **2019. Bangladesh journal of Medical Science.**
58. Shujaat Ahmad. Effects of Maillard reaction on physicochemical and functional properties of walnut protein isolate. **2019. Food Science and Biotechnology.**
59. Phytochemical investigation of *hyoscyamus albus*.
2019. Pakistan Journal of Pharmaceutical Sciences.
60. Isolation and characterization of C19-Diterpenoid Alkaloids from the roots of Aconitum Heterophyllum Wall. **2019. Journal of Medicinal Chemistry and Drug Design.**
61. Algal Extracts Based Biogenic Synthesis of Reduced Graphene Oxides (rGO) with Enhanced Heavy Metals Adsorption Capability. **2019 Journal of Industrial and Engineering Chemistry.**
62. Tor Jan, Gul Jan In-vitro antifungal, antibacterial, phytotoxic, brine shrimp, insecticidal activities and composition of essential oil of Tagetes minuta from Dir Kohistan, Pakistan.
2019. Pakistan Journal of Botany.
63. Enhanced dissolution rate of Ketoprofen by fabricating into smart nanocrystals.
2019. Pakistan Journal of Pharmaceutical Sciences.
64. ANTIBIOTIC UTILIZATION IN PEDIATRIC IN-PATIENTS AT A TERTIARY CARE UNIT.
2018 The Professional Medical Journal.
65. Norditerpenoids alkaloids of delphinium danudatum as cholinesterase inhibitor.
2018. Bioorganic Chemistry.
66. Saponins and solvent extracts from Atriplex laciniata L. exhibited high anthelmintic and Insecticidal activities.
2018. Journal of Traditional Chinese Medicine.
67. Selective dual cholinesterase inhibitors from Aconitum laeve.
2017. Journal of Asian Natural Products Research.
68. Antioxidant and anticholinesterase potential of diterpenoid alkaloids from Aconitum heterophyllum.
2017. Bioorganic and Medicinal Chemistry.
69. Antibacterial and antibiofilm potential of leaves extracts of Mirabilis jalapa L. and Ajuga bracteosa wall. Against Pseudomonas aeruginosa.
2018. Pure and Applied biology.

70. Crystal structure, phytochemical study and enzyme inhibition activity of Ajaconine and Delectinine.

Journal of Molecular Structure.

71. Isolation, crystal structure determination and cholinesterase inhibitory potential of isotalatizidine hydrate from Delphinium denudatum.

2017. Pharmaceutical Biology.

72. Haya Hussain, **Shujaat Ahmad**, ...Assessment of prescription pattern and prescription errors using the World Health Organization drug use indicators in Lady Reading Hospital Peshawar, Pakistan: A retrospective study.

2017. Journal of Khyber Medical University.

73. In vivo anti-inflammatory characterization of crude extract and solvent fractions of Viola serpens.

2016. Pharmaceutical Biology.

74. Prescribing pattern of drugs for diabetic patients in a tertiary care private sector hospital, Peshawar, Pakistan. **2016. Journal of Khyber Medical University.**

75. Kinetics Study of Biopolymers Mixture with the Help of Confocal Laser Scanning Microscopy.

2015. Journal of Food Process Engineering.

76. Babar Ayub, ... **Shujaat Ahmad**. Cost Comparison Study between a Private Sector and a Public-Sector Hospital in Peshawar, Khyber Pakhtunkhwa, Pakistan for Myocardial Infarction Patients.

2015. Journal of Khyber Medical University.

77. Effects of high hydrostatic pressure on emulsifying properties of sweet potato protein in model protein-hydrocolloids system. **2015. Food Chemistry.**

78. Buddlejol, a new α -chymotrypsin inhibitor from Buddleja asiatica.

2015. Medicinal Chemistry Research.

79. Pharmacotherapeutical study of peptic ulcer disease.

2013. International J of Research in Applied, Natural and Social Science.

80. Ethnobotanical study of some of some elite plants belonging to Dir, Kohistan valley, Khyber Pakhtunkhwa, Pakistan. **2011. Pakistan Journal of Botany.**

81. Medicinal plants of Ushera valley, Dir NWFP, Pakistan.

2010. Pakistan Journal of Botany.

Patents/ Books /Chapters Published.

1. Pakistani Patent. (Patent No=144023)

A process for the production of low glycemic index flour from starch-fatty acid complexes through high speed shear homogenization.

2. Book Chapter No 4 Adulteration and safety issues in nutraceuticals and functional foods

In Book Advances in nutraceuticals and functional foods concepts and applications. **2021.**

CRC Press Taylor and Francis Group (Applied Academic Press)

<https://www.appleacademicpress.com/advances-in-nutraceuticals-and-functional-foods-concepts-and-applications/9781774637524>

3. Concise Book of Human Anatomy for Pharmacists.2020.

Lambert Academic Publishers.

<https://www.amazon.com/Concise-Book-Human-Anatomy-Pharmacists/dp/6202529725>

4. Book Chapter No 15. Nanomaterials: fundamentals and applications.2024.

Elsevier Publishers. <http://dx.doi.org/10.1016/B978-0-323-95517-1.00016-0>

<https://doi.org/10.1016/B978-0-323-95517-1.00016-0>

Licensures/Professional Memberships

- Pakistan Pharmacist Association.
- Registered Pharmacist KP Pharmacy Council.
(Registration No.1256-A/2008-PC, NWFP)

Contact Information

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District Dir Upper. Khyber Pakhtunkhwa, Pakistan. **(Current Address)**