

Dr Jawaria Aslam

Date of birth: 03/12/1991 | **Nationality:** Pakistani | **Gender:** Female | **Email address:** jawariaaslam@cuvas.edu.pk |
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● ABOUT ME

Assistant Professor and PhD-qualified Biochemist with 10+ years of academic experience in teaching and research. Research expertise encompasses nanobiotechnology, medicinal plant research, computational drug discovery, vaccine designing, and experimental pharmacology, integrating *in silico*, *in vitro*, and *in vivo* approaches, with publications in high-impact SCI-indexed journals. Actively supervised 20 postgraduate research thesis and has delivered invited talks at international conferences in Saudi Arabia.

● EDUCATION AND TRAINING

2017 – 2022 Bahawalpur, Pakistan
PHD The Islamia University of Bahawalpur

Explored the phytochemical composition, nanobiotechnology, and therapeutic potential of *Ochthochloa compressa* and *Neurada procumbens* using integrated *in silico*, *in vitro*, and *in vivo* approaches. The study identified bioactive compounds (by HPLC, GC/LC-MS, FTIR), with significant antioxidant, antidiabetic, anti-inflammatory, antimicrobial, antiviral, antibiofilm, and antipyretic activities. Green-synthesized **ZnO and Ag nanoparticles** demonstrated enhanced biological efficacy, supporting the development of plant-based therapeutics and nanomedicine. This research was successfully published in multiple SCI-indexed journal.

Website www.iub.edu.pk | **Field of study** Biochemistry |
Thesis Antimicrobial and Pharmacological Properties of Ochthochloa compressa and Neurada procumbens from Cholistan

2013 – 2015 Faisalabad, Pakistan
M.PHIL University of Agriculture Faisalabad

Explored the antibiofilm activity of cephalosporins against clinically relevant *Staphylococcus aureus* and *Escherichia coli*. Biofilm architecture and chemical changes following treatment were characterized using FTIR, phase-contrast microscopy, and SEM, demonstrating significant disruption of mature biofilms. The research was successfully published in an SCI-indexed journal.

Website www.uaf.edu.pk | **Field of study** Biochemistry | **Final grade** Silver Medalist |
Thesis Microbial Biofilm Inhibition and Hydrolysis by Cephalosporins.

2009 – 2013 Bahawalpur, Pakistan
BS (HONS.) The Islamia University of Bahawalpur

Research Experience

- Conducted a literature-based research project on identifications of breast cancer tumor biomarkers and their molecular significance.
- Completed a research internship at the Enzymology Laboratory, University of Agriculture Faisalabad (UAF), gaining hands-on experience in enzymatic assays and biochemical laboratory techniques.

Website www.iub.edu.pk | **Field of study** Biochemistry

● WORK EXPERIENCE

ASSISTANT PROFESSOR – CHOLISTAN UNIVERSITY OF VETERINARY AND ANIMAL SCIENCES – 11/03/2024 – Current –
BAHAWALPUR, PAKISTAN

Academic Leadership, Teaching & Service

- Delivered 18 undergraduate and postgraduate courses in Biochemistry and related disciplines.
- Successfully supervised 20 M.Phil. research theses.

- Served as Deputy Director (Planning & Development) and member of the Finance & Procurement and Admissions Committees.
- Appointed Biochemistry Admissions Focal Person, Female Student Advisor, and Scientific Advisory Board Member (IBSP).

ASSISTANT PROFESSOR – BIRS, BAHAWALPUR MEDICAL AND DENTAL COLLEGE – 07/12/2015 – 13/03/2023 –
BAHAWALPUR, PAKISTAN

Academic Responsibilities

- Delivered Medical Biochemistry I & II (10 contact hours/week).
- Supervised undergraduate research projects and student mentoring.
- Conducted workshops on Computational Biology, Biostatistics, and Research Methodology.
- Developed curricula, laboratory practicals, examinations, and student assessments.

● SKILLS

Microsoft Office | Python | MD simulations | Network Pharmacology | R language | Spss Software | clinical biochemistry | Machine Learning | Chemoinformatics, Bioinformatics, Python, Gaussian16, DFT. | In-silico Chimeric Vaccine Construction | molecular docking

● RESEARCH INTERESTS AND EXPERTIES

Research Experties

• Natural Product Biochemistry • Green Nanobiotechnology & Nanoinformatics • Metabolic, Inflammatory & Infectious Diseases • Antimicrobial Resistance & Biofilm Research • Machine Learning and Deep Learning • Molecular Pharmacology • Molecular Docking & Dynamics Simulation • Network Pharmacology • Bioinformatics & AI-Assisted Drug Discovery • In Silico Vaccine Design

● PUBLICATIONS

2026

[Anatomical and molecular identification of Culex mosquitoes and comparative larvicidal efficiency of Aloe vera and Cassia fistula green synthesized silver nanoparticles](#)

Authors: Ullah, S., Kayani, H.A., Naz, S., Ali, H.M., Fatima, R., Haq, F., Ali, H., Ahmed, M.Z.Y., Aslam, J., ur Rehman, H.M.S. and Sajid, N.,
| **Journal Name:** Asian Journal of Agriculture and Biology

2025

[Chemical finger-printing, antioxidant activity and in silico validation of phytometabolites of Octhochloa compressa.](#)

Authors: Aslam, J., Hussain, T., Shahzad, M. I., Ali, H.M., Aslam, M., Shahid, M., Jamal, A., Farooq, U., Asif, S., Abbas, S. K., Fouad, D., Ataya, S. F., Ahmadova, & K., Chachar, Z. | **Journal Name:** Scientific report

2025

[Exploring the antidiabetic potential of Octhochloa compressa: a comprehensive study on chemical profiling, in vitro, in vivo and in silico pharmacological properties.](#)

Authors: Aslam, J., Shahzad, M. I., Aati, H. Y., Khan, K. U. R., Aslam, M., Jamal, A., & Ghalloo, B. A. | **Journal Name:** Frontiers in Pharmacology,

2025

[Exploring in-vitro antioxidant, cytotoxicity, hemolytic, thrombolytic and anticancer potentials of Ochthochloa compressa \(Forssk.\) Hilu.](#)

Authors: Atif, M., Shahzad, M. I., Khan, M. Y., Maqbool, T., Aslam, J., Hadi, F., Rivera G, & Rauf, A. | **Journal Name:** Plos One

2024

[Effectiveness of cephalosporins in hydrolysis and inhibition of Staphylococcus aureus and Escherichia coli biofilms.](#)

Authors: Aslam, J., Ali, H. M., Hussain, S., Ahmad, M. Z., Siddique, A. B., Shahid, M., & Alarjani, K. M. | **Journal Name:** Journal of Veterinary Science

2024

Metabolomics Biomarkers in Prediction of Sudden Infant Death Syndrome: The Role of Short Chain Fatty Acids.

Authors: Aslam, M., Riaz, O., Aslam, J., Khan, D.M., Hameed, M., Suleman, M., Shahid, R., Althobaiti, T. and Ramzan, N., | **Journal Name:** IEEE Access

2024

Effects of sub-lethal concentrations of lindane on histo-morphometric and physio-biochemical parameters of Labeo rohita.

Authors: Afzal, G., Ali, H.M., Hussain, T., Hussain, S., Ahmad, M.Z., Naseer, A., Iqbal, R., Aslam, J., Khan, A., Elsadek, M.F. and Al-Munqedhi, B.M. | **Journal Name:** Plos One

2024

Enhanced Wound Healing Effects of Herbal Gel formulations in A Rabbit Model: A comparative study.

Authors: Alfaraj, D., Kashif, M., Ullah, F., Ali, H. M., Qayyum, A., Yamin, A., Aslam, J. & M., Suleman. | **Journal Name:** Asian Journal of Agriculture and Biology

● **CERTIFICATIONS**

Bahawalpur Medical and Dental College, 2017
Best Teacher Award

University of agriculture Faisalabad, 2015
Silver Medal

DHS Freelance Hub, 2025
Computational Aided Drug Design

DHS Freelance Hub, 2025
Nanoinformatics

DHS Freelance Hub, 2025
In silico vaccine designing

DHS Freelance Hub, 2025
Network Pharmacology

DHS Freelance Hub, 2026
DFT & MD simulations

● **CONFERENCES AND SEMINARS**

10/02/2025 – 12/02/2025 Jeddah
3rd International Conference on Emerging Research in Sciences & Humanities (3rd ERSB-2025)

Invited Speaker on "Green Synthesis and Applications of Zinc Oxide Nanoparticles from *Heliotropium curassavicum*" – Presented at the 3rd International Conference on Emerging Research in Sciences & Humanities (3rd ERSB-2025). Jeddah, Kingdom of Saudi Arabia, February 10–12, 2025

14/03/2025 – 15/03/2025 Medinah
International Conference on Forestry Food and Sustainable Agriculture (ICFFSA), Medinah Conference (2025)

Keynote Speaker on "Chemical Profiling, Acute and Nephrotoxicity of *Heliotropium curassavicum*" – Presented at the International Conference on Forestry Food and Sustainable Agriculture (ICFFSA), Medinah Conference (2025). Medinah, Kingdom of Saudi Arabia, March 14–15 2025

● **LANGUAGE SKILLS**

Mother tongue(s): **URDU**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C2	C2	C1	C2
ARABIC	A2	B1	A1	A1	A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● REFERENCES

Professor Dr. Muhammad Shahid

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Department of Biochemistry
University of Agriculture Faisalabad, Pakistan.

Dr. Mirza Imran Shahzad

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Department of Biochemistry
The Islamia University of Bahawalpur, Pakistan.