



MUHAMMAD ASIF ZEB

Date of birth: 04/01/1985 | **Place of birth:** Mardan, Pakistan | **Nationality:** Pakistani |

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ABOUT ME

Highly motivated and results-oriented academic with over 12 years of experience in Medical Laboratory Technology (MLT) education and research. Specializes in bridging the gap between clinical diagnostics and innovative research, with a current focus on cancer metabolism, particularly in Acute Myeloid Leukemia (AML). Proven ability to design and implement competency-based curricula, integrate modern pedagogies like Team-Based Learning (TBL), and mentor students to excel in research. A DAAD scholarship recipient with international research experience in Germany, dedicated to advancing diagnostic methodologies and fostering the next generation of medical laboratory scientists.

WORK EXPERIENCE

WORKING AS LECTURER MEDICAL LABORATORY TECHNOLOGY – AT KHYBER MEDICAL UNIVERSITY – 02/12/2013 –
Current – PESHAWAR, PAKISTAN

WORKED AS A TEACHING RESEARCH FELLOW – AT UNIVERSITY OF HEALTH SCIENCES – 01/02/2013 – 29/11/2013 –
LAHORE, PAKISTAN

WORKED AS MEDICAL TECHNOLOGIST – AT SHAUKAT KHANUM CANCER MEMORIAL HOSPITAL – 09/12/2009 –
15/01/2012 – LAHORE, PAKISTAN

WORKED AS ASSISTANT TECHNICAL OFFICER OF LABORATORY – AT SHIFA INTERNATIONAL HOSPITAL – 25/01/2012
– 16/01/2013 – ISLAMABAD, PAKISTAN

UNIVERSITY RESEARCH ASSISTANT – 04/06/2024 – 03/12/2024 – DRESDEN, GERMANY

Address: Carl Gustav Carus Hospital. Dresden, 01307, Dresden, Germany

EDUCATION AND TRAINING

03/03/2021 – 20/04/2026 Haripur, Pakistan

PHD IN MEDICAL LABORATORY SCIENCES From University of Haripur

Website <https://uoh.edu.pk>

2020 Peshawar, Pakistan

MASTER IN HEALTH PROFESSIONS EDUCATION (MPHIL) From Khyber Medical University

Website <https://kmu.edu.pk>

2009 Karachi, Pakistan

M.SC. HEMATOLOGY From Baqai Medical University

Website <https://baqai.edu.pk>

2015 Lahore, Pakistan

MASTER TRAINING PROGRAM ON BIOSAFETY AND BIOSECURITY RISK MANAGEMENT IN CLINICAL LABORATORY AT University of Veterinary and Animal Science

Website <https://uvas.edu.pk>

2016 Peshawar, Pakistan

CERTIFICATE IN HEALTH RESEARCH (CHR) From Khyber Medical University

Website <https://kmu.edu.pk>

CYTOGENETIC BASIC TECHNIQUES AND CLINICAL APPLICATION

● **HONOURS AND AWARDS**

First position in M.Sc. (Gold medal) – Baqai Medical University, Karachi

First position in BSc. (Gold medal) – Baqai Medical University, Karachi

03/06/2024

Scholarship – DAAD Scholarship Germany

● **PROJECTS**

Responsibilities as Researcher

- Supervised undergraduate MLT research projects from conception to thesis defense.
- Mentored students in advanced techniques: mammalian cell culture, transfection/transduction, metabolic (lactate) assays, flow cytometry, Western blot and RT-qPCR.
- Guided 3 student projects to co-authorship in peer-reviewed journals.
- Conducted weekly troubleshooting sessions to strengthen critical thinking, data analysis, and experimental problem-solving skills.
- Trained students in safe handling and maintenance of core lab instruments (biosafety cabinets, cell culture equipment, automated analyzers).
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02/12/2013 – CURRENT

Responsibilities As Academician

- Designed competency-based MLT curriculum integrating TBL, PBL, and simulation-based learning for 200+ students annually.
- Deliver lectures and facilitate small-group sessions in Clinical Chemistry, Hematology, Microbiology, and Immunology.
- Mentored junior faculty and medical students in teaching methodologies and academic development.
- Developed and validated assessment tools to measure critical thinking, clinical competency, and student learning outcomes.
- Led curriculum review and continuous quality improvement initiatives.
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● **PUBLICATIONS**

2022

Effect of team-based learning on critical thinking: A quasi-experimental study

Zeb MA, Mahboob U, Shaheen N. Effect of team-based learning on critical thinking: A quasi-experimental study. Pak J Med Sci. 2022 Nov-Dec;38(8):2234-2238

Journal Name: Pak J Med Sci

2026

CRIP1 knockdown enhances glycolytic dependence and increases sensitivity to 2-Deoxy-D-Glucose in acute myeloid leukemia

Zeb MA, Awan FM, Khan AA, Khan SN. CRIP1 knockdown enhances glycolytic dependence and increases sensitivity to 2-Deoxy-D-Glucose in acute myeloid leukemia. Mol Biol Rep. 2026 Feb 11;53(1):382

Journal Name: Molecular biology reports

2026

CRIP1 functions as an oncogene in acute myeloid leukemia by modulating glycolytic metabolic reprogramming

Zeb MA, Khan AA, Ahmad A, Gui W, Awan FM, Dhamija B, Khan SN. CRIP1 functions as an oncogene in acute myeloid leukemia by modulating glycolytic metabolic reprogramming. Sci Rep. 2026 Apr 15;16(1)

Journal Name: Scientific Reports

2025

Comparative outcomes of childhood and adult therapeutic protocols in acute lymphoblastic leukemia: a retrospective cohort from a tertiary care center in Pakistan

Muhammad Asif Zeb, Muhammad Ishaq, Muhammad Ihtesham, Muhammad Kamran, Farhan Nawaz, Saddam, Fawad Inayat

Journal Name: Frontier in Medical & Health Research

2025

Evaluation of therapeutic strategies and outcomes in patients with chronic lymphocytic leukemia at Hayatabad Medical Complex, Peshawar

Marwat, Aqib, et al. " Evaluation of therapeutic strategies and outcomes in patients with chronic lymphocytic leukemia at Hayatabad Medical Complex, Peshawar." Pakistan Journal of Medical & Cardiological Review 4.4 (2025): 1436-1444.

Journal Name: Pakistan Journal of Medical & Cardiological Review

2020

Effect of haemodialysis on haematological parameters in chronic kidney failure patients Peshawar-Pakistan

Muhammad, Anees; Zeb, Muhammad Asif; Ullah, Aman; Afridi, Irfan Qadir; Ali, Nasir

Journal Name: Pure and Applied Biology | **Volume, Issue and Pages:** 9

Molecular Characterization of HBB Gene Variations in Beta-Thalassemia Patients from Khyber Pakhtunkhwa, Pakistan

Ahmad, S.; Khan, L.; Mustafa, M.; Khan, Y.; Shah, S.F.; Ahmad, F.; Khan, T.; Zeb, M.A.; Zaman, Q.; Jelani, M. Molecular Characterization of HBB Gene Variations in Beta-Thalassemia Patients from Khyber Pakhtunkhwa, Pakistan. Thalass. Rep. 2026

Journal Name: Thalassemia Reports | **Volume, Issue and Pages:** 15 | **Publisher:** MDPI

2026

Exploiting Metabolic Vulnerabilities in Acute Myeloid Leukemia: Rationale and Evidence for Combining Metabolic Modulators with Conventional Chemotherapy

Authors: Usman Ali Shams, FawadInayat, Muhammad Asif Zeb, Maryam, Sulaiman Shams, Muhammad Jawad Ullah, Silvia Jiménez-Morales | **Journal Name:** pharmaceuticals

● **SKILLS**

Microsoft Office | automated analysers in the medical laboratory | Handling and maintenance of both suspended and adherent cancer cell lines | Metabolic Assays | Plasmid isolation | Transfection and transduction techniques for gene delivery into mammalian cells | Gene expression Analysis through RTqPCR | Flow Cytometry | Western blotting

● **LANGUAGE SKILLS**

Mother tongue(s): **PASHTO**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C2	C2	C2	C2
URDU	C2	C2	C2	C2	C2

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