



Muqadas Fatima

Nationality: Pakistani **Date of birth:** 01/01/2000 **Gender:** Female



Phone number: (+92) 3096574620



Email address: muqadasbiochemist@gmail.com



WeChat: Muqadasfatima1



Home: Rawalpindi, Islamabad (Pakistan)

SUMMARY

I am Muqadas Fatima, holding a BS in Biochemistry and an MS in Biochemistry and Molecular Biology. Currently a visiting faculty member at PMAS Arid Agriculture University Rawalpindi. I excel in teaching, research and coordination. I have strong organization skills coupled with excellent communication abilities to coordinate office activities and facilitate smooth workflow. I am a results-driven individual, passionate about contributing to the growth and success of any organization I join.

EDUCATION AND TRAINING

MASTER OF SCIENCE (MS) Biochemistry & Molecular Biology

Comsats University Islamabad, Pakistan [2022 – 2024]

City: Islamabad | **Country:** Pakistan | **Final grade:** CGPA 3.37/4 | **Thesis:** Expression of TET3 Gene in Breast Cancer

Tasks and Skills Achieved

- Collected tumor and adjacent normal tissues, preserved them at -80°C, and extracted RNA.
- Confirmed RNA integrity via agarose gel electrophoresis and quantified purity using a Nanodrop.
- Synthesized cDNA and optimized primers for TET3 and β -actin genes.
- Performed qRT-PCR to analyze TET3 gene expression in breast cancer samples.
- Correlated TET3 expression with clinical factors like age, tumor size, grade, and metastasis.
- Conducted statistical analyses using Mann-Whitney, T-tests, and ANOVA to validate findings.

Research Skills Acquired: Developed essential research skills including RNA isolation, quantification, cDNA synthesis, primer optimization, qRT-PCR, agarose and gel electrophoresis for molecular analysis. Statistical methods like Mann-Whitney, T-tests, and ANOVA were used for data correlation.

BACHELOR OF SCIENCE (BS) BIOCHEMISTRY

PMAS Arid Agriculture University Rawalpindi, Pakistan [2018 – 2022]

City: Rawalpindi | **Country:** Pakistan | **Final grade:** CGPA 3.42/4 | **Thesis:** The prevalence of *Toxoplasma gondii* in the human population of Pakistan

- The objective of the study was to determine the prevalence of *T. gondii* in the human population of Pakistan and identify associated risk factors.
- Collected and organized demographic and lifestyle data from diverse population groups and then analyzed survey data using statistical tools to identify prevalence patterns and correlations.
- Conducted literature reviews to contextualize findings within global and regional *T. gondii* studies and applied critical thinking to interpret results and suggest public health recommendations.

PUBLICATIONS

Fatima, M., Yousaf, A., Riaz, K., Ijaz, A., Asghar, N., & Saeed, M. (2024). Cancer Epigenetic Insights: Molecular intricacies of TET3 Gene

Diagnostic and Its Therapeutics in Breast Cancer Subtypes and Progression. *African Journal of Biomedical Research*, 27(4s), 9197-9205.

Kaloom, Z., Javed, W., Sannam, S., **Fatima, M.**, Manzoor, A., Devi, D., Hameed, I., Ali, S., Abbasi, A., Moqaddas, A., Asghar, N., Khan, A. A., Aziz, O., Khan, M. S., Razzaq, H., & Khaliq, H. M. H. (2024). Insights from CRISPR-CAS Technology: Revolutionizing Cancer Research, Unveiling Therapeutic Strategies, and Advancing Personalized Cancer Treatment Approaches. *Journal of Population Therapeutics and Clinical Pharmacology*, 31(8), 296-317.

A comprehensive NSCLC radiogenomics review covering the latest AI approaches and statistical analysis methods. **(Submitted)**

Integrating deep learning in drought stress using a novel approach: Time-efficient deep learning framework. **(Submitted)**

WORK EXPERIENCE

Visiting Lecturer

PMAS Arid Agriculture University Rawalpindi, Pakistan [Current]

- Teaching undergraduate (BS) students through lectures and practical sessions
- Planning and organizing academic activities including lectures, tutorials, and course materials
- Organizing seminars and awareness sessions to enhance student knowledge and engagement
- Assessing and evaluating student work, providing constructive feedback.

Scientific Writing

Fiver/LinkedIn [2020 – Current]

- Experienced in scientific and academic writing, with expertise in literature review, data analysis, and manuscript preparation.
- Proficient in assignments, presentations, thesis writing, and project defense, with a focus on clarity and precision.
- Demonstrated ability to articulate complex scientific concepts effectively through blog and content writing.
- Competent in structuring and presenting research findings in a clear, concise, and engaging manner.

Research Fellow

COMSATS University Islamabad, Pakistan [2023 – 2024]

MS Research Project – Expression of TET3 Gene in Breast Cancer.

- Conducted extensive research on the expression of the TET3 gene in breast cancer samples.
- Developed a deep understanding of molecular diagnostics and its applications in cancer research.
- Performed all key molecular biology techniques including,
 - Sample collection, RNA extraction, and cDNA preparation.
 - RT-PCR, Gel Documentation system, and PCR for gene amplification.
 - Operated Centrifuge, Autoclave, and Nano Drop for sample quantification and preparation.

Teacher

Ali Trust Model School Khanna, Islamabad, Pakistan [2022 – 2024]

- Taught SSC-level Biology with a focus on laboratory practicals and applied biological sciences.
- Developed lab exercises and demonstrations to help students understand fundamental biological processes.
- Managed classroom activities and provided guidance for students in preparing lab reports and conducting experiments.

Elective ship/Internship

Shaukat Khanum Memorial Trust Lahore, Pak. [2023]

- Gained extensive hands-on experience in biochemistry, molecular biology and microbiology lab rotations.
- Assisted in the interpretation of clinical test results, providing valuable practical insights into medical diagnostics.

Internship

District Head Quarter Hospital Jauharabad, Pak. [2023]

- Specialized in molecular biology and biochemistry, with a focus on PCR techniques and gene expression analysis.
- Conducted pathology rotations, enhancing understanding of disease mechanisms through tissue and cell examination.

Research Intern

PMAS Arid Agriculture University Rawalpindi, Pak. [2019 – 2020]

- Conducted sample collection, prepared serial dilutions, and set up various microbiological and biochemical assays.
- Prepared growth media and performed inoculation and isolation techniques for microbial cultures.
- Gained experience in bioprocessing, including monitoring and optimizing microbial growth for industrial applications.
- Collaborated on research projects related to biotransformation and biosorption, with a focus on environmental sustainability.

CONFERENCES AND SEMINARS

[14/03/2023 – 15/03/2023] Next Generation Sequencing (NGS) Data Analysis.

Offices of Research, Innovation and Commercialization (ORIC)

[27/02/2023 – 03/03/2023] Hands-on Training for Building Real-World AI Applications.

National Centre of Artificial Intelligence (NCAI)

COURSES AND LEARNING EXPERIENCE

[09/2024] Customer Management

[21/08/2024] Search Engine Optimization (SEO) with Squarespace

[08/2024] Coursera Project Network

[08/2024] Intro to Exploratory Data Analysis with Excel

[08/2024] Introduction to Digital Marketing

HONOURS AND AWARDS

The Punjab Educational Endowment Fund. [2015]

Certificate of Scholarship

LANGUAGE SKILLS

English

LISTENING C1 READING C2 WRITING C2 SPOKEN PRODUCTION C1 SPOKEN INTERACTION C1

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

DIGITAL SKILLS

UniProt / NCBI tools (Genbank, BLAST) / SPSS / Origin pro / Graph pad Prism / Social Media / Statistics /Microsoft Word /

Microsoft Office / Microsoft Excel / Outlook

Lab Experience (Gel-electrophoresis, DNA, RNA extraction, PCR, Gel Doc, Auto Clave, NANODROP, Centrifuge)

RECOMMENDATIONS

Name: Dr. Muhammad Umer | Tenured Associate Professor Department of Biosciences, COMSATS University
Islamabad, Pakistan **Email:** muhammadumer@comsats.edu.pk

Name: Dr. Muhammad Nadeem Hassan | Assistant Professor Department of Biosciences, COMSATS
University Islamabad, Pakistan **Email:** nadeem_hassan@comsats.edu.pk