

Maliha Fatima

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SUMMARY

- Interdisciplinary academic professional with robust expertise in Biosciences and Bioinformatics, combining teaching, research, and administrative skills to foster educational excellence.
- Proven ability to manage academic programs, mentor students, and contribute to educational development.
- Skilled in maintaining academic standards and aligning departmental activities with institutional goals.
- Seeking to contribute to a dynamic organization where I can enhance my skills, grow professionally, and excel as a dedicated and innovative team member.

TECHNICAL AND DIGITAL SKILLS

- **Academic Coordination:** Assisted in academic activities and maintaining departmental standards through collaboration and coordination.
- **Microbiology:** Aerobic and Anaerobic isolation, Biofilm assays, Consortium development, Biotransformation experiments.
- **Biochemistry:** ELISA, Enzymatic assays, Reagent preparations, Protein Identification.
- **Molecular Biology:** PCR, RT/qPCR, DNA extraction, SDS PAGE, Spectrophotometer techniques, HPLC.
- **Cell Biology:** Cell culture, Cell assays, Cell engineering, Microscopy.
- **Genomics:** DNA library construction for high-throughput sequencing.
- **Software and Data Analysis:** R, SPSS, Microsoft Office, PyMol, AutoDock Vina, Discovery Studio, Ligplot, EndNote.

RESEARCH EXPERIENCE

Capital University of Science and Technology

Research Associate

Dec 2022 to June 2024

- Led a funded project focused on developing a microbial consortium for enhanced petroleum recovery, demonstrating skills in project management, experimental design, and data quality control.
- Collaborated on a multi-department project targeting quorum quenching strategies for MRSA and Pseudomonas infections, aligning research activities with high-quality academic standards and goal-setting frameworks.
- Conducted primary research on biofilm-associated antimicrobial resistance, employing rigorous quality checks to ensure research outcomes met publication standards.
- Leading a project focusing on the isolation and identification of therapeutic agents involved in the activation of PPAR-Y to ameliorate Type 2 Diabetes.

TEACHING AND MENTORING EXPERIENCE

- 2022-2024: Mentored 5 undergraduate students, guiding laboratory techniques, quality control practices, and data reporting.
- 2017-2020: Lecturer of Biology and Chemistry, fostering an environment of excellence and contributing to student academic growth and learning outcome improvement.

EDUCATION

- PhD, Biosciences, Capital University of Science and Technology, 2023-in process.
- MS, Biosciences, Capital University of Science and Technology, 2022.
- MSc, Biology, Arid Agricultural University, 2017.
- BSc, Botany, Zoology, Chemistry, 2015.

AWARDS

- Best research thesis award, 2023.
- Graduate Dean Honor Roll award, 2022.
- Graduate scholarship, 2021.

CONFERENCE PRESENTATIONS

- Presented at the International Conference on Emerging Trends in Microbiology and Molecular Genetics, Women University, Multan (2023), focusing on microbiological innovations for sustainable development.
- Presented at the 7th International Conference on Climate-Smart Agriculture, Poonch University (2022), showcasing commitment to interdisciplinary bio and environmental sciences approaches.
- Participant in the 10th C-BICS Conference, Department of Bioinformatics and Biosciences, Capital University of Science and Technology, Islamabad (2022), focusing on advances in biological and computational sciences to address emerging issues in life sciences.

PUBLICATIONS

1. Amin, A., Khan, I.U., Amin, M. et.al. Resurrected microorganisms: a plethora of resting bacteria underway for human interaction. *AMB Expr* 14, 106 (2024). <https://amb-express.springeropen.com/articles/10.1186/s13568-024-01750-z>
2. Fatima, M.; Amin, et.al. Quorum Quenchers from *Reynoutria japonica* in the Battle against Methicillin-Resistant *Staphylococcus aureus* (MRSA). *Molecules* 2023, 28, 2635. <https://www.mdpi.com/2193636>
3. Liaqat, A., Fatima, M., Ishtiaq, S., & Amin, A. (2023). Designed ORF protein for sustainable third-generation biofuel production. 4(1), 105-128. <https://jmmg.wum.edu.pk/index.php/ojs/article/view/106>

REFERENCES

Dr. Saher Fazal (Prof) saher@cust.edu.pk	Dr. Marriam Bakhtiar (Asst.Prof) marriam@cust.edu.pk	Dr. Arshia Amin Butt (Asst.Prof) arshia.butt@cust.edu.pk	Dr. Shaukat Iqbal (Prof) shaukat@cust.edu.pk
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