

Mohadsa Zainab

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🏠 Islamabad, Pakistan.

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PROFESSIONAL SUMMARY

Microbiologist with a Master's degree in Molecular Medicine and strong training in laboratory techniques, aseptic practices, and quality-focused microbiological work, with a solid research background and strong command of experimental methodologies and data analysis.

EDUCATION

Master's of Science in Molecular Medicine,
National University of Sciences and Technology

September 2025
Islamabad

- CGPA: 4/4
- Thesis: Elucidating the role of *Ocimum basilicum* on Hyperandrogenism in letrozole-induced PCOS mice model (A network pharmacological & in-vivo approach)
- Advances in Diagnostics, Medical Biochemistry, Model Systems for Medical Research & Drug Discovery and Drug Development

Bachelor's of Science in Microbiology,
Capital University of Science and Technology

February 2022
Islamabad

- Obtained Scholarship merit-based
- Awarded 7 Dean of Honor's
- Graduated with 3.64 CGPA
- Thesis: Association of Gut Microbial Dysbiosis with the severity of symptoms in Autism Spectrum Disorder
- Grade Awarded: A
- Pharmacogenomics, Medical Microbiology, Epidemiology

WORK EXPERIENCE

Intern, **Integrative Biology Lab, NUST**

June 2021-August 2021
Islamabad

- Performed molecular docking analysis to study drug-receptor interactions and predict binding affinities in biological systems.
- Discovery Studio, Pymol, PatchDock, FireDock, trRosetta
- Contributed to pharmacological target evaluation and compound screening studies relevant to drug development.

Intern, **World Wide Fund(WWF)**

May 2020-July 2020
Rawalpindi

- Gained exposure to environmental and conservation initiatives.
- Developed understanding of WWF's conservation goals, project operations, and environmental policy frameworks.

Paid Intern, **International Research Force**

January 2023
Islamabad

- Lead an inspection team to monitor the deworming campaign to ensure safe and reliable drug distribution in various schools of Islamabad. Completed data entry tasks accurately while adhering to strict deadlines.
- Supported quality monitoring through field surveys and reporting.

WORK EXPERIENCE

Intern, **National Institute of Health, NIH**

May 2022- Aug 2022

Islamabad

- Gained hands-on experience in phlebotomy and sample handling under clinical lab protocols.
- Performed routine clinical chemistry tests and assisted in histopathological slide preparation.
- Conducted ELISA assays and supported quality control procedures in diagnostic testing.
- Assisted with patient data entry, report generation, and lab information system updates.
- Worked in a Zoonotic Disease Laboratory, processing COVID-19 clinical specimens following microbiological and biosafety protocols.
- Gained hands-on experience in molecular diagnostics, including RNA extraction and RT-PCR for viral detection.

Academic Writer, **Freelancing**

Since April 2022

Islamabad

- Provided research-based academic writing services in microbiology, molecular biology, and related biomedical sciences.
- Prepared literature reviews, lab reports, and scientific summaries for topics including microbial pathogenesis, diagnostics, and immunology.
- Interpreted scientific data and explained experimental methods (e.g., PCR, ELISA, culture techniques) for academic assignments.
- Ensured all work adhered to scientific accuracy, referencing standards (APA, MLA, etc.), and academic integrity.

CERTIFICATES

- Hands-on training on PCR and Gel Electrophoresis at Protein services lab
- Community service project at The NGO World

PUBLICATIONS

Zainab, M., Tarique, I. (2025). Elucidating the role of *Ocimum basilicum* on Hyperandrogenism in letrozole-induced PCOS mice model. *Phytomedicine*.

SKILLS

- ☐ **Microbiological & Molecular Techniques:**
PCR | RT-PCR | ELISA | RNA Extraction | cDNA Synthesis | Spectrophotometry
- ☐ **Pharmaceutical Microbiology & QA/QC:**
Aseptic Techniques | Quality Control Procedures | Contamination Control | SOP Compliance | Data Integrity | Biosafety
- ☐ **Laboratory Techniques:**
Microbial Handling | Clinical Diagnostics | Histopathology Support
- ☐ **Research & Software:**
Molecular Docking | Network Pharmacology | PyMOL | Discovery Studio | Data Analysis
- ☐ **Animal Model Handling:**
Mice handling | Dosing | Dissection | In-Vivo Experimental Procedures