

# Nuzhat Jahan

 Bachelor of Science (B.Sc.) in Microbiology

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## Professional Profile

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Research-oriented Microbiology graduate interested in infectious disease diagnostics, molecular biology, and immunological assays. Trained as an intern at icddr,b and CARS, University of Dhaka, with significant experience in bacterial culture, PCR/qPCR, ELISA, flow cytometry, and high-throughput Luminex platforms. Experienced in large-scale clinical research, laboratory documentation, and GLP compliant workflows. Keen to contribute to public health research and advancements.

## Professional Experience

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**Intern, icddr,b May 2025 – August 2025: Dhaka, Bangladesh Supervisor: Dr. Ferdousi Qadri, Chief Scientist, Emeritus Scientist, IDD Administration, Infectious Diseases Division**

- Conducted laboratory evaluations for cholera Rapid Diagnostic Test (RDT) studies, performing bacterial culture and biochemical assays to assess the sensitivity and specificity of 5 novel diagnostic kits.
- Executed molecular and immunological workflows, including DNA/RNA extraction, qPCR, and TAC RT-PCR for pathogen detection, alongside ELISA, ELISpot, and flow cytometry for vaccine-induced immune response characterization.
- Performed high-throughput multiplexing using the Luminex platform to profile antigens and cytokines for large-scale enteric pathogen research and vaccine immunogenicity trials.
- Maintained precise laboratory documentation and followed strict BSL-2 biosafety protocols to ensure data integrity for clinical research.

**Intern, Centre for Advanced Research in Sciences (CARS) February 2025 – April 2025:**

*University of Dhaka, Bangladesh*

*Supervisor: Dr. Md. Latiful Bari, Chief Scientist*

- Prepared microbiological media and conducted controlled fermentation experiments under aseptic conditions.
- Evaluated microbial growth and enzyme activity, supporting process optimization and method consistency.
- Maintained GLP-compliant documentation and laboratory safety standards.

**Poster Presentation:** Participated in the 39th Annual Conference of the Bangladesh Society of Microbiologists (BSM), themed “Microbiome for a Sustainable Future,” held on 21–22 December 2025 at the University of Dhaka.

**R&D Officer-Trainee, WAFFEN Research Laboratory Limited November 2025 – January 2026: Dhaka, Bangladesh**

- Supported laboratory-based R&D activities, including experimental execution and product development under supervised training.
- Contributed to data analysis and reporting for ongoing R&D projects.
- Adhered to laboratory safety, aseptic practices, and organizational compliance standards.

## Education

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**Independent University Bangladesh**  
Bachelor of Science (B.Sc.) in Microbiology  
CGPA: 3.92/4.00 (*Summa cum laude*)

2021 – 2025

**Shaheed Bir Uttam Lt Anwar Girls' College, Dhaka**  
Higher Secondary Certificate (HSC), Science Division  
GPA: 5.00/5.00

2017 – 2019

**Mirpur Bangla School and College, Dhaka**  
Secondary School Certificate (SSC), Science Division  
GPA: 5.00/5.00

2016 – 2017

## Research Experience

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**Thesis Project for BSc : Isolation, identification and characterization of emerging pathogen *Stenotrophomonas maltophilia* isolated from hospital settings in Dhaka city:**

- Isolated and identified *Stenotrophomonas maltophilia* from hospital environmental samples using selective culture techniques and PCR.
- Performed antimicrobial susceptibility testing (MIC/MBC) and biofilm formation assays to assess contamination and microbial risk.
- Gained practical exposure to environmental monitoring concepts and microbial risk assessment in controlled environments.

## Technical Skills

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<b>Microbiology and QC</b>	Bacterial culture; sterility-related testing concepts; environmental monitoring (air, surface, personnel); media preparation and growth promotion testing; aseptic handling and contamination control; MIC/MBC determination; biofilm assays
<b>Molecular and Analytical Techniques</b>	PCR, qPCR, TAC RT-PCR; DNA/RNA extraction (manual and automated)
<b>Quality and Compliance</b>	GMP, GLP, GCP awareness; SOP documentation
<b>Instrumentation and Analysis</b>	ELISA; Luminex (high-throughput multiplexing); ELISpot; flow cytometry

## Certifications and Awards

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- ✿ IUB Merit-based Scholarship (100%); *Summa cum laude* Graduate, Dean's List (Spring 2022); Dean's Honor List (Summer 2022); Vice Chancellor's Honor List (Autumn 2022–2024)
- ✿ 3rd Place, Rufaida BioMeds Poster Competition (2025)
- ✿ Hands-on Training: Bioinformatics & Molecular Biology
- ✿ Coursera: Whole Genome Sequencing of Bacterial Genomes (Technical University of Denmark)

## References

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