

MD TANGIMUL ISLAM

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Profile

I am currently pursuing a fully-funded International MSc in Infectious Diseases and One Health, taught in English, through the Erasmus Mundus Joint Master Degree program. This degree is refining my skills to address health challenges with the vision of Biomedical sciences. My background includes extensive theoretical knowledge of biological sciences, hands-on relevant laboratory skills, and experience in grant writing, project management, and scientific outreach.

Education

Sep 2023 – Aug 2025
(Ongoing)

MSc. Infectious Diseases & One Health (IDOH+),

Part of the Erasmus Mundus Joint Master Degree program

Major Coursework: Immunology and Statistics (R Programming), Host-Pathogen Interactions, Virulence and Resistance, Animal Welfare, Models and their Alternatives, Biosafety and Biosecurity, Translational Medicine and Innovative Therapies, Genomes and Genome Editing, Sci. Reading, Writing, and Presentation.

Key Labworks: Bacteria/Virus culture, Analytical profile index, Plaque assay, ELISA, SDS-PAGE, Western blot, Microscopy, Handling pathogens in BSL2, BSL3/BSL4 labs, CRISPR-Cas9, Biosecurity in biocontainment, Hazard identification and risk assessment, Mouse model dissection, Precision cut lung slices, Biosafety, hygiene and good laboratory practice (GLP), Geographical Information System (GIS)

Jan 2025 – June 2025

MSc. Thesis Title: "*Macrophage-specific function of the deubiquitinating enzyme OTUD7B in Listeria monocytogenes infections*".

Supervisor: Dr. NG Krishna, Hannover Medical School (MHH), Germany.

Jan 2016 – Jan 2020

BSc. Biotechnology and Genetic Engineering, Khulna University, Bangladesh
CGPA: 3.73/4.00 (**Position: 2nd out of 40**)

BSc. Thesis Title: "*Molecular Identification of Native Bacteria Isolated from Selective Chicken GIT Using 16S rRNA Sequencing*".

Supervisor: Dr. K. M. Hossain, Professor, BGE Discipline, Khulna University

Research Interests: Immunology and Microbiology, Microbiome, infectious and immunity, Immunology of infectious diseases, Gut microbiome and probiotics, Microbes induced cancer, Microbial informatics.

Research Experiences

July 2024 – Aug 2024

Summer Internship

Project Title: "*Macrophage-derived EVs: An early diagnosis of colorectal cancer*".

Supervisor: Dr. Milladur Rahman, JTB Research Group.

Institute: Department of Clinical Sciences, Malmö, Lund University, Sweden

Skills Acquired: Cell culture (CT 26 and HT 29) and related assays (XTT, Luciferase), RNA extraction, qRT-PCR, siRNA transfection, Drug testing, Confocal microscopy, Flow cytometry, Lab notebook keeping.

Jan 2022 – July 2022

Research Assistant

Project Title: "*Identification of the role of Tif3 in gene expression in S. cerevisiae under different conditions from publicly available RNA-seq data*".

Supervisor: Dr. S.M. Abdul Awal, Professor, BGE Discipline, Khulna University

Institute: Khulna University, Khulna-9208, Bangladesh.

Skills Acquired: Basic scripting in Python, R. Experience in Linux/Command line, Public database mining (NCBI GEO, SRA), RNA-seq quality control (FastQC, MultiQC), Data visualization (ggplot2), Bioinformatics pipelines (HISAT2, featureCounts), Data normalization (TPM, FPKM), Differential expression analysis (DESeq2), functional analysis (GO, KEGG), Scientific presentation

- Oct 2021- Sept 2022 **Research Assistant**
Project Title: "Twice harvesting of Boro rice in the southwest of Bangladesh"
Supervisor: Dr. Md. Matiul Islam, Professor, Agrotechnology, Khulna University
Institute: Khulna University, Khulna-9208, Bangladesh.
Skills Acquired: Rice cultivation, morphological data collection, grain nutrient and soil sample composition analysis, Data analysis, report writing, scientific presentation and submit article for publication.
- Oct 2019– Sept 2020 **Research Assistant**
Project Title: "Molecular Characterization of Isolated Native Probiotic Bacteria from Selective Yogurt and Chicken Samples using 16S rRNA Gene Sequencing"
Supervisor: Dr. K. M. Hossain, Professor, BGE Discipline, Khulna University
Institute: Khulna University, Khulna-9208, Bangladesh.
Skills Acquired: Regional GIT and Yoghurt collection, Biochemical identification of bacteria, DNA Isolation, PCR, 16S rRNA gene sequencing, data analysis, and project report writing.

Publications

- **Islam, M. T.**, Joy, A. H., Sultana, P., Datta, M., Sardar, D., Afsana, S., Karim, M. R., & Mizan, M. F. R. (2024). Probiotics in gut health: A review exploring mechanisms and evidence in the prevention of common human diseases. (In preparation)
- Islam, S. S., **Islam, M. T.**, & Islam, M. M. (2024). Performance of Main and Ratoon Crop for Boro Rice (*Oryza sativa* L.) in a Saline Soil of Southwest Coastal Region of Bangladesh. Journal of Agricultural Sciences–Sri Lanka, 19(3). <https://doi.org/10.4038/jas.v19i3.10109>

Awards and Achievements

- **Scholarships**
 - Erasmus Mundus Joint Master Degree Scholarship, 2023-25
 - Academic Merit Scholarship, BGE Discipline, Khulna University, Bangladesh, 2017-19
- **Poster/Oral**
 - Champion, IAAS Asia-Pacific Idea-based Poster Competition-2022 (Virtual)
 - Finalist, The Minutes Thesis Competition (3MT)-2019, LS School, Khulna University,
 - National Runner Up, Intra-Discipline Scientific Talk-2019, BGE Discipline. Khulna University
 - 2nd Runner Up, Biotechnology Business Idea Contest-2018, Dhaka, Bangladesh
- **Participation**
 - The World Health Summit 2024 (October 13-15) in Berlin, Germany
 - The IAAS Asia-pacific Directors' Annual Meeting 2023 (May 04-09), Kathmandu, Nepal
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Skills and Activities

- **Writing and graphics:** Grant proposal writing, Scientific illustration (Adobe InDesign and Illustrator)
- **Science outreach:** Editor, Operon- A Biotech Magazine by Journal Club of Khulna University
- **Leadership:**
 - Former One Health Coordinator, IAAS World 2022-2023,, Leuven, Belgium
 - President, Helix-A Biotech Club, BGE Discipline, Khulna University
 - Vice President, Debating Club- Noiayeek, Khulna University, Khulna-9208, Bangladesh
 - Organizing Secretary, International Biology Olympiad, Khulna Division, Bangladesh
- **Professional Skill:** Junior Soft Skill Trainer, IAAS Training Committee, Leuven, Belgium

Languages: English (C1), French (A1), Spanish (A1), Arabic (Reading), Bengali (Native)

- IELTS (10 August 2023): Overall: 6.5; Listening 6.5, Reading 7.0, Writing 6.0, Speaking 7.0
- IELTS (17 December 2022): Overall: 7.0; Listening 7.5, Reading 5.5, Writing 6.5, Speaking 7.5)

Membership: The International Scientific Association for Probiotics and Prebiotics (ISAPP)

References

- **Dr. Milladur Rahman** (PI, Summer Internship)
 Assoc. Prof., CRC, Lund University, Sweden, E-mail: milladur.rahman@med.lu.se
- **Dr. Stéphanie GERMON** (EMJMD, IDOH+ Coordinator)
 Lab. BIOMAP & Asst. Prof., University of Tours, France; E-mail: master-emjmd-idoh@univ-tours.fr