

# TAHRIMA ARMAN TUSTY

## SCIENTIFIC OFFICER

National Institute of Biotechnology (NIB), Dhaka, Bangladesh

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## EDUCATION

<b>Master of Science (with thesis)</b>	Department of Genetic Engineering and Biotechnology, University of Dhaka, Bangladesh GPA: 3.87 (on a scale of 4.00)	<b>2019</b>
<b>Bachelor of Science (Honor's)</b>	Department of Genetic Engineering and Biotechnology, University of Dhaka, Bangladesh CGPA: 3.79 (on a scale of 4.00)	<b>2018</b>

## RESEARCH EXPERIENCE

<b>Aug 2020 - present</b>	<b>Scientific Officer</b>   National Institute of Biotechnology	<ul style="list-style-type: none"><li>• <b>Project director</b> of the project entitled "Molecular cloning of the <i>Bacillus subtilis</i> S108 <math>\alpha</math>-amylase gene in <i>Escherichia coli</i> BL21(DE3)"</li><li>• <b>Project director</b> of the project entitled "Whole genome sequencing of <math>\alpha</math>-amylase producing <i>Bacillus subtilis</i> and molecular modeling of the enzyme"</li><li>• <b>Associate investigator</b> of the project entitled "Development of eco-friendly microbial enzymes for leather and textile processing."</li><li>• <b>Associate investigator</b> of the project entitled "Probiotics for human health"</li></ul>
<b>Jul 2019 – Dec 2019</b>	<b>Research Associate</b>   Department of Genetic Engineering and Biotechnology, University of Dhaka	<ul style="list-style-type: none"><li>• Project entitled "Genotypic and phenotypic characterization of <i>Streptococcus mutans</i> strains isolated from patients with dental caries"</li><li>• Supervisor- Dr. Mohammed Nazmul Ahsan, Professor, Department of Genetic Engineering and Biotechnology, University of Dhaka</li></ul>
<b>May 2018 – Jun 2019</b>	<b>Graduate Research Student</b>   Department of Genetic Engineering and Biotechnology, University of Dhaka	<ul style="list-style-type: none"><li>• Project entitled "Novel mutation identification in <i>HSD3B2</i> gene responsible for congenital adrenal hyperplasia development"</li><li>• Supervisor- Dr. Mohammed Nazmul Ahsan, Professor, Department of Genetic Engineering and Biotechnology, University of Dhaka</li></ul>

## PUBLICATIONS

1. **Tusty TA**, Rafiuzzaman M, Paul S, Sharmin S, Hossain MS, Jahid IK, Salimullah M, Hashem A, Sarkar PK. 2023. Production and *In-silico* Characterization of Alpha-Amylase by Newly Isolated *Bacillus subtilis* S108 from Municipal Solid Waste. BSM Annual Conference, Sylhet, Bangladesh.

## SKILLS AND EXPERTISE

<b>Molecular biology</b>	Biomolecule extraction, quantification and purification; PCR; agarose gel electrophoresis and SDS-PAGE; Molecular cloning and bacterial transformation; Enzyme assay;
<b>Cell biology</b>	Cell passage, maintenance, counting, seeding, preservation and thawing
<b>Microbiology</b>	Clinical and environmental sample collection; media preparation; culture techniques; stock preparation; Gram staining
<b>Bioinformatics</b>	NGS data and prokaryotic WGS data analysis; sanger sequencing data analysis; data mining from databases; primer/probe designing; BLAST; MSA and phylogenetic tree construction; microarray data analysis; protein modeling and validation

**Cross-functional** Strong understanding of good laboratory practice (GLP); goal-setting skills, proposal writing, and report presentation skills

## GRANTS AND FELLOWSHIPS

- 2022** **Research and Development Grant** from Ministry of Science and Technology (MoST), Bangladesh.  
**2021** **Research and Development Grant** from Ministry of Science and Technology (MoST), Bangladesh.  
**2018** **Research Fellowship** from National Institute of Science and Technology (NST) for conducting research relevant to socio-economic concerns of Bangladesh.

## SCHOLARSHIPS AND AWARDS

- 2018** **Government Scholarship** for overall excellent performance (academic and non-academic) during the 4 years of BS(Honor's) curriculum  
**2018** **Dean's Award** from Biological Faculty, University of Dhaka for excellent results in BS (Honor's) examinations  
**2017** **Award of Excellence** for best performance in Training Course on Biosafety and Animal Cell Culture for Advanced Research

## TRAININGS AND WORKSHOPS

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|-------------|--|--|
| <b>2023</b> | Training on ' <b>Introduction to R, Python and Linux</b> '                                   | Establishment of Next Generation Sequencing and Analytics (NGS) Project; NIB                         |
| <b>2023</b> | Hands-on training on ' <b>Proteomics Principles and Application</b> '                        | Establishment of Advanced Laboratory Facilities for Transgenic and Space Research (TSR) Project, NIB |
| <b>2022</b> | Hands-on training on ' <b>Gene cloning, Gene expression and Recombinant DNA Technology</b> ' | TSR Project, NIB   |
| <b>2022</b> | Training on ' <b>Advanced Bioinformatics</b> '   | NGS Project; NIB   |
| <b>2022</b> | Training on ' <b>Basic Bioinformatics Concepts, Databases and Tools</b> '                    | NGS Project; NIB   |
| <b>2017</b> | ' <b>Biosafety and Cell Culture Techniques</b> ' for Advance Research                        | Center for Advanced Research in Sciences (CARS), University of Dhaka                                 |

## REFERENCES

**Dr. Mohammed Nazmul Ahsan**  
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