Ismat Jahan Anee

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# Research Interest

Molecular Biology, Cell Biology, Aging, Host-Pathogen Interactions, Infectious Disease, Therapeutic Drugs, Population Genetics.

# Education

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| Masters in Genetics & Molecular Biology (2018-2019)  University of Dhaka  CGPA 4.00 out of 4.00, Position: First |
| Bachelors in Zoology (2015-2018)  University of Dhaka  CGPA 3.93 out of 4.00, Position: First |

# Test Score

TOEFL iBT (Internet-based test)

Score: 107 (R28 L27 S24 W28)

# Publications

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| 2022  “The effect of RAD7 gene’s null mutation on single-cell aging”. **Ismat Jahan Anee**, Reza Md Shahjahan, Rowshan Ara Begum, Mohammad Shamimul Alam, Ashfaqul Muid Khandaker. Microbial Bioactives. [[Link](https://publishing.emanresearch.org/Journal/Abstract/microbbioacts-514307)] |
| 2021  “The role of probiotics on animal health and nutrition.” The journal of Basic and Applied Zoology, SpringerNature. **Anee, I.J.**, Alam, S., Begum, R.A. et al. The role of probiotics on animal health and nutrition. JoBAZ 82, 52 (2021). [[Link](https://doi.org/10.1186/s41936-021-00250-x)] |

# Conference Paper

2022

“Analyzing the Effect of PMS1 Gene Deletion Mutation in Single Cell Aging” Fatema Akter Sadia, Nazela Ahmed Chowdhury, Mahapara Tabassum, **Ismat Jahan Anee**, Rowshan Ara Begum, Ashfaqul Muid Khandaker. International Conference on Environmental Protection for Sustainable Development (ICEPSD-2022); Forest and Environment Affairs Sub-Committee, Bangladesh Awami League.

2021

“The role of DNA repair genes on cellular aging.” **Ismat Jahan Anee**, Reza Md Shahjahan, Rowshan Ara Begum, Mohammad Shamimul Alam, Ashfaqul Muid Khandaker. 22nd National Conference & AGM 2020. Zoological Society of Bangladesh & Department of Zoology, University of Dhaka. [[Link](https://www.researchgate.net/publication/363364472_THE_ROLE_OF_DNA_REPAIR_GENES_ON_CELLULAR_AGING)]

# Work Experience

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| Research Fellow, Bangladesh Council of Scientific and Industrial Research  2022  Received Professor Nurul Afsar Khan Post Graduate Fellowship. Working on Project “Microplastics in Fish Feed: An Alarming Issue in Aquaculture Sector of Bangladesh.” |
| Short Term Temporary (STT) & Short-Term Consultant (STC) at The World Bank  November 2021 – Present  Project 1. Natural Capital Valuation and Spatial Planning for Southwest Region of Bangladesh.  Project 2. Bangladesh 2022 Country Environmental Analysis: Institutional Analysis.  Project 3. Gender dimensions and identifying business case for tackling Abandoned, Lost and Discarded Fishing Nets (ALDFN) and discarded plastics in coastal areas in Bangladesh |
| Research Assistant, University of Dhaka  August 2021 – April 2022  Under Project “Biological survey, genetic analysis, current dose assessment and genotoxicity evaluation of some candidate pesticides to rapidly control dengue/chikungunya vectors (*Aedes* spp.) in Bangladesh.” |

# Research Experience

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| Worked with Dr. Ashfaqul Muid Khandaker on “The effect of RAD7 gene’s null mutation on single-cell aging” [[Link](https://publishing.emanresearch.org/Journal/Abstract/microbbioacts-514307)]  2022  Status: Published (**Microbial Bioactives**); Keywords: DNA Repair Gene; mitochondria; cell aging; RAD7; Saccharomyces cerevisiae   * We deciphered aging on yeast model using *RAD7* gene null mutation. * CLS, glycerol spotting assay, mtDNA abundance by fluorescence microscopy, bioinformatics analysis have been performed. |
| Worked with Dr. Nahid Sultana on “Microplastics in Fish Feed: An Alarming Issue in Aquaculture Sector of Bangladesh.”  2022  Status: Ongoing; Keywords: Micro plastics; fish feed; fish meal  - We will analyse microplastics in fish feed collected from different parts of Bangladesh  - Fish tissue sampling; microplastics extraction, analysis using FTIR |
| Worked with Dr. Ashfaqul Muid Khandaker on “The role of probiotics on animal health and nutrition” [[Link](https://doi.org/10.1186/s41936-021-00250-x)]  2021  Status: Published (**SpringerNature**); Keywords: Probiotics; Poultry, Ruminant, Aquaculture, Immunity, Animal health   * We demonstrated how probiotics can modulate host gut system and provide beneficiary impact without causing drug resistance as like antibiotics |
| Worked with Dr. Ashfaqul Muid Khandaker “The Role of DNA Repair Genes on Cellular Aging” (Master’s Thesis Work) [[Link](https://www.researchgate.net/publication/363364472_THE_ROLE_OF_DNA_REPAIR_GENES_ON_CELLULAR_AGING)]  2021  Status: Completed   * Worked on null mutation of *RAD7*, *MSH1* & *MSH3* gene to decipher the role of these genes on single-cell (*Saccharomyces cerevisiae*) lifespan |
| Worked with Dr. Rowshan Ara Begum & Dr. Gawsia Wahidunnessa Chowdhury on “A Report on Water Analysis and Parameters of the Sundarban Rivers” (Undergraduate Field Work) [[Link](https://www.researchgate.net/publication/363364110_A_Report_on_Water_Analysis_and_Parameters_of_the_Sundarban_Rivers)]  2018  Status: Completed   * Analysed DO, pH, salinity, and other water parameters by collection water sample from different parts of Sundarbans |

# Awards

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| Award | Awarded By | Year |
| Professor Nurul Afsar Postgraduate Fellowship | Bangladesh Council of Scientific and Industrial Research (BCSIR) | 2022 |
| Majumder Abdul Muttalib & Habiba Begum Trust Fund Scholarship | Majumder Abdul Muttalib & Habiba Begum Trust Fund, University of Dhaka | 2022 |
| Fourth position, Urban Health Innovation Challenge 2021: Healthy Safe and Inclusive Cities | BRAC JPGSPH, BRAC University, World Vision | 2021 |
| **M.S. Thesis Award** | **National Science and Technology Fellowship** | **2020** |
| Regional Champion, Graduate and Postgraduate group, Zoology Olympiad | Zoological Society of Bangladesh | 2019 |
| **Dean’s Award for Brilliant Result in B. Sc. Honors** | **Dhaka University** | **2018** |
| Honors Scholarship (Faculty of Biological Sciences) | Education Board Bangladesh | 2018 |
| Razia Memorial Trust Fund Scholarship | Razia Memorial Trust Fund, University of Dhaka | 2018 |
| Asefa Huque Memorial Trust Fund Scholarship | Asefa Huque Memorial Trust Fund, University of Dhaka | 2017 |

# Trainings

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| R for Data Analysis  September 2019 – October 2019  Institute of Statistical Research and Training (ISRT), University of Dhaka |
| Spanish Junior Course (Level A)  2018  Institute of Modern Languages, University of Dhaka |
| Training Course on SPSS for Professionals & Students  April 2017  Department of Statistics, University of Dhaka |
| **Training on bird Ringing and Sample Collection Under Project “Investigation of Wild to Domestic Bird Avian Influenza Transmission: A Multiyear Monitoring and Surveillance Program, IUCN”**  2017, 2018  **-** Training on bird Ringing and Sample Collection.  - Stayed at Hakaluki Haor and Tanguar Haor and conducted the survey and research. |

# Volunteering Experience

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| Fellow  September-October 2020  Everyday Stories (BRAC JPGSPH, BLAST & CREA, Bangladesh) |
| Volunteer Field Assistant  March-May 2018  Faculty of Environment and Natural Resources, University of Freiburg, Germany |
| Academic Team Member  January 2015 – December 2017  Society for the Popularization of Science, Bangladesh (SPSB) |

# Reference

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| Dr. Ashfaqul Muid Khandaker  Assistant Professor, Dept. of Zoology, University of Dhaka,  Email: [muid.zoo@du.ac.bd](mailto:muid.zoo@du.ac.bd)  Profile: <https://www.du.ac.bd/faculty/faculty_details/ZOO/2282> |
| Dr. Rowshan Ara Begum  Professor, Dept. of Zoology, University of Dhaka  Email: [rowshanbegum@du.ac.bd](mailto:rowshanbegum@du.ac.bd)  Profile: <https://du.ac.bd/body/faculty_details/ZOO/1738> |
| Dr. Mohammad Riazul Islam  Professor, Dept. of Biochemistry and Molecular Biology, University of Dhaka  Email: [mriazulislam@du.ac.bd](mailto:mriazulislam@du.ac.bd)  Profile: <https://du.ac.bd/body/faculty_details/BCH/1531> |