Nadim Sharif

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PROFESSIONAL EXPERIENCE

- **Assistant Professor,** Department of Microbiology, JU, Bangladesh [09 October 2024-Present].
- **Lecturer,** Department of Microbiology, JU, Dhaka, Bangladesh [29 June 2021- 08 October 2024].
- **Research Assistant,** Clinical Microbiology and Immunology Laboratory, JU [January 2018-May 2021].
- **Editorial Board Member,** BMC Infectious Diseases [July 2024-Present].
- **Academic Editor,** PLoS ONE [June 2022-Present].
- **Review Editor,** Frontiers in Microbiology [April 2022-Present].
- **Review Editor,** Frontiers in Virology [March 2022-Present].

EDUCATIONAL BACKGROUND

- **PhD candidate** (Biological and Biomedical Sciences, University of Vermont, USA).
- **M.Sc. in Microbiology:** (2016-17; Awarded in 2017, Thesis group), JU, BD; Result: **3.95** on a scale of 4.00 (in CGPA).
- **B.Sc. in Microbiology:** (2013-16; Awarded in 2016), JU, BD; Result: **3.95** on a scale of 4.00 (in CGPA).

SKILL AND EXPERTISE

- **Wet lab techniques:** Microbial culture media and buffer preparation, Pure culture isolation, Biochemical tests of microorganisms, Antimicrobial potency determination tests, Microbial growth curve analysis using spectrophotometer, Microbial growth and metabolite measurements using chromatography, Staining of microorganisms and tissues, Fluorescent microscopy, Total DNA and RNA extraction using column-based method, cDNA library formation using reverse transcriptase method, Agarose gel electrophoresis, ELISA, Dot-blot assay, and Western blotting.
- **Dry lab skills:** Nucleotide sequence data annotation, Nucleotide data alignment, Mutation analysis, Phylogenetic tree building and analysis, Primer designing, Probe designing, Protein modeling and molecular docking analysis by Expasy, PyMOL, and AutoDock Vina.
- **Software and platform:** Chromas, BioEdit, BEAST, MEGA, BLAST, Adobe Photoshop, SPSS, and Linux operating system.
- **Programming language:** R and Python.
- **Language:** English; IELTS-7.5 (Listening: 8.0, Reading: 8.0, Writing: 7, Speaking: 6.5).

RESEARCH INTERESTS

Molecular Epidemiology, Infectious Diseases, Structure Biology, Molecular Genetics, Bioinformatics, and Biostatistics.

RESEARCH PUBLICATIONS

Journal Articles

1. **Sharif N** et al. Antimicrobial resistant enteric bacteria are widely distributed among environmental water sources in Dhaka, Bangladesh. npj Clean Water. 2025; 8(1):16.

2. **Sharif N**, Opu RR, Khan A, et al. Clinical epidemiology of dengue and COVID-19 co-infection among the residents in Dhaka, Bangladesh, 2021-2023: A cross-sectional study. *Open Forum Infectious Diseases.* 2025; ofaf039. https://doi.org/10.1093/ofid/ofaf039
3. **Sharif N**, Ahmed SN, Khandaker S, Monifa NH, Abusharha A, Vargas DL, et al. Multidrug resistance pattern and molecular epidemiology of pathogens among children with diarrhea in Bangladesh, 2019–2021. *Scientific Reports*. 2023;13:13975. https://doi.org/10.1038/s41598-023-41174-6.
4. **Sharif N**, Ahmed SN, Sharif N, Alzahrani KJ, Alsuwat MA, Alzahrani FM, et al. High prevalence of norovirus GII. 4 Sydney among children with acute gastroenteritis in Bangladesh, 2018–2021. *Journal of Infection and Public Health*. 2023;16:1015-22. https://doi.org/10.1016/j.jiph.2023.05.002.
5. Mou TJ, Sumon SH, Nupur NA, **Sharif N**, Islam MF, Dey SK, Parvez MA. Comprehensive insight on multidrug resistance and virulence genes of ESBL-producing *E. coli* from different surface water sources in Bangladesh. *Journal of Water and Health*. 2024:jwh2024120. https://doi.org/10.2166/wh.2024.120.
6. **Sharif N,** Sharif N, Khan A, Azpíroz ID, Martínez R, Díez ID, et al. Prevalence and genetic diversity of rotavirus in Bangladesh during pre-vaccination period, 1973-2023: a meta-analysis. *Frontiers in Immunology*. 2023;14:1289032. https://doi.org/10.3389/fimmu.2023.1289032.
7. **Sharif N**, Opu RR, Saha T, Khan A, Aljohani A, Alsuwat MA, et al. Side effects associated with homogenous and heterogenous doses of Oxford–AstraZeneca vaccine among adults in Bangladesh: an observational study. *Scientific Reports*. 2024;14:23794. https://doi.org/10.1038/s41598-024-75833-z.
8. **Sharif N,** Sharif N, Khan A, Dey SK. The epidemiologic and clinical characteristics of 2023-dengue outbreak in Bangladesh. *Open Forum Infectious Diseases*. 2024:ofae066. https://doi.org/10.1093/ofid/ofae066.
9. **Sharif N**, Sharif N, Khan A, and Dey S K. Tackling the outbreak of nipah virus in Bangladesh amidst COVID-19: A potential threat to public health and actionable measures. *Health Science Reports*. 2024;7:e2010. https://doi.org/10.1002/hsr2.2010.
10. **Sharif N**, Opu RR, Saha T, Masud AI, Naim J, Alsharif KF, et al. Evolving epidemiology, clinical features, and genotyping of dengue outbreaks in Bangladesh, 2000–2024: a systematic review. *Frontiers in Microbiology*. 2024;15. https://doi.org/10.3389/fmicb.2024.1481418.
11. **Sharif N**, Dey SK. Epidemiology of mpox: Focus on men with HIV. *Heliyon*. 2023;9:e22129. https://doi.org/10.1016/j.heliyon.2023.e22129.
12. **Sharif N**, Ahmed SN, Khandaker S, Monifa NH, Talukder AA, Parvez AK, Dey SK. Prevalence and impact of long COVID-19 among patients with diabetes and cardiovascular diseases in Bangladesh. *Frontiers in Public Health*. 2023;11:1222868. https://doi.org/10.3389/fpubh.2023.1222868.
13. **Sharif N**, Alzahrani KJ, Ahmed SN, Khan A, Banjer HJ, Alzahrani FM, et al. Genomic surveillance, evolution and global transmission of SARS-CoV-2 during 2019–2022. *Plos one.* 2022;17(8):e0271074. https://doi.org/10.1371/journal.pone.0271074.
14. **Sharif N**, Alzahrani KJ, Ahmed SN, Opu RR, Ahmed N, Talukder A, et al. Protective measures are associated with the reduction of transmission of COVID-19 in Bangladesh: A nationwide cross-sectional study. *Plos one*. 2021; 16(11):e0260287. https://doi.org/10.1371/journal.pone.0260287.
15. **Sharif N**, Nobel NU, Sakib N, Liza SM, Khan ST, Billah MB, et al. Molecular and Epidemiologic Analysis of Diarrheal Pathogens in Children With Acute Gastroenteritis in Bangladesh During 2014–2019. *The Pediatric Infectious Disease Journal*. 2020;39:580-585. https://doi: 10.1097/INF.0000000000002637.

16. **Sharif N**, Parvez AK, Haque A, Talukder AA, Ushijima H, Dey SK. Molecular and epidemiological trends of human bocavirus and adenovirus in children with acute gastroenteritis in Bangladesh during 2015 to 2019. *Journal of Medical Virology*. 2020;92:3194-3201. https://doi.org/10.1002/jmv.25812.
17. Miah R, Siddiqa A, Chakraborty U, Tuli JF, Barman NK, Uddin A,…, **Sharif N**, et al. Development of high temperature simultaneous saccharification and fermentation by thermosensitive Saccharomyces cerevisiae and *Bacillus amyloliquefaciens*. *Scientific Reports*. 2022;12,3630. https://doi.org/10.1038/s41598-022-07589-3.
18. **Sharif N**, Alzahrani KJ, Ahmed SN, Dey SK. Efficacy, Immunogenicity and safety of COVID-19 vaccines: A systematic review and meta-analysis. *Frontiers in Immunology*. 2021:4149. https://doi.org/10.3389/fimmu.2021.714170.
19. **Sharif N**, Sarkar MK, Ferdous RN, Ahmed SN, Billah MB, Talukder AA, et al. Molecular epidemiology, evolution and reemergence of chikungunya virus in South Asia. *Frontiers in Microbiology*. 2021;12:1411. https://doi.org/10.3389/fmicb.2021.689979.
20. Dey SK, **Sharif N**, Sarkar OS, Sarkar MK, Talukder AA, Phan T, Ushijima H. Molecular epidemiology and surveillance of circulating rotavirus among children with gastroenteritis in Bangladesh during 2014-2019. *PloS one*. 2020;15:e0242813. https://doi.org/10.1371/journal.pone.0242813.
21. **Sharif N,** Sarkar MK, Ahmed SN, Ferdous RN, Nobel NU, Parvez AK, et al. Environmental correlation and epidemiologic analysis of COVID-19 pandemic in ten regions in five continents. *Heliyon*. 2021;7:e06576. https://doi.org/10.1016/j.heliyon.2021.e06576.
22. **Sharif N**, Opu RR, Alzahrani KJ, Ahmed SN, Islam S, Mim SS, et al. The positive impact of social media on health behavior towards the COVID-19 pandemic in Bangladesh: A web-based cross-sectional study. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*. 2021;15:102206. https://doi.org/10.1016/j.dsx.2021.102206.
23. **Sharif N**, Ahmed SN, Opu RR, Tani MR, Dewan D, Daullah MU, et al. Prevalence and impact of diabetes and cardiovascular disease among patients infected with COVID-19 in Bangladesh. *Diabetes and Metabolic Syndrome: Clinical Research and Reviews.* 2021;15:1009-1016. https://doi.org/10.1016/j.dsx.2021.05.005.
24. **Sharif N,** Ahmed SN, Opu RR, Daullah MU, Khan S, Talukder AA, et al. Impact of meteorological parameters and population density on variants of SARS-CoV-2 and outcome of COVID-19 pandemic in Japan. *Epidemiology and Infection.* 2021;149:E103. https://doi.org/10.1017/S095026882100100X.
25. **Sharif N**, & Dey S. Impact of population density and weather on COVID-19 pandemic and SARS-CoV-2 mutation frequency in Bangladesh. *Epidemiology and Infection*. 2021;149:E16. https://doi.org/10.1017/S0950268821000029.
26. **Sharif N,** Opu RR, Ahmed SN, Sarkar MK, Jaheen R, Daullah MU, et al. Prevalence and impact of comorbidities on disease prognosis among patients with COVID-19 in Bangladesh: A nationwide study amid the second wave. *Diabetes and Metabolic Syndrome: Clinical Research and Reviews.* 2021. 15(4):102148. https://doi.org/10.1016/j.dsx.2021.05.021.
27. **Sharif N**, Dey SK. Phylogenetic and whole genome analysis of first seven SARS-CoV-2 isolates in Bangladesh. *Future Virology*. 2020;15:735-746. https://doi.org/10.2217/fvl-2020-0201.
28. Dey SK, **Sharif N**, Billah MB, Siddique TT, Islam T, Parvez AK, et al. Molecular epidemiology and genetic diversity of norovirus infection in children with acute gastroenteritis in Bangladesh, 2014-2019. *Journal of Medical Virology*. 2021;93:3564-3571. https://doi.org/10.1002/jmv.26772.

29. **Sharif N**, Sharif N, Alzahrani KJ, Halawani IF, Alzahrani FM, Díez ID, Lipari V, Flores MA, Parvez AK, Dey SK. Molecular epidemiology, transmission and clinical features of 2022-mpox outbreak: A systematic review. *Health Science Reports*. 2023;6:e1603. https://doi.org/10.1002/hsr2.1603.
30. **Sharif N**, Opu RR, Khan A, Alzahrani KJ, Banjer HJ, Alzahrani FM, et al. Impact of Zinc, Vitamins C and D on Disease Prognosis among Patients with COVID-19 in Bangladesh: A Cross-Sectional Study. *Nutrients*. 2022;14:5029. https://doi.org/10.3390/nu14235029.
31. Alzahrani KJ, **Sharif N**, Khan A, Banjer HJ, Parvez AK, Dey SK. Impact of meteorological factors and population density on COVID-19 pandemic in Saudi Arabia. *Saudi Journal of Biological Sciences*. 2022:103545. https://doi.org/10.1016/j.sjbs.2022.103545.
32. Shaha M, Sifat SF, Al Mamun M, Billah MB, **Sharif N**, Nobel NU, et al. Comparative evaluation of sensitivity and specificity of immunochromatography kit for the rapid detection of norovirus and rotavirus in Bangladesh. *F1000Research*. 2019; 8:173. https://doi.org/10.12688/f1000research.17362.2.
33. Adnan N, Khondoker MU, Rahman MS, Ahmed MF, Sharmin S, **Sharif N**, Azmuda N, Akter S, Nahar S, Mou TJ, Marzan M. Coding-Complete Genome Sequences and Mutation Profiles of Nine SARS-CoV-2 Strains Detected from COVID-19 Patients in Bangladesh. *Microbiology Resource Announcements.* 2021;10. https://doi.org/10.1128/MRA.00124-21.
34. Dey S, **Sharif N**. Evaluation of a rapid immunochromatography (IC) diagnosis kit for the detection of rotavirus and norovirus in diarrheal stool specimens in Bangladesh. *International Journal of Infectious Diseases.* 2020;101:192. https://doi.org/10.1016/j.ijid.2020.09.513.
35. Dey S, **Sharif N**. Genetic diversity of bacterial pathogens in children with acute gastroenteritis in Bangladesh during 2014-2019. *International Journal of Infectious Diseases.* 2020;101:142. https://doi.org/10.1016/j.ijid.2020.09.386.

Book Chapters

1. **Sharif N**, Dey SK. Infectious Diseases and Global Health Inequity. The Landscape of Global Health Inequity. Cham: Springer Nature, Switzerland. 2024;Jul 11:pp. 11-22.
2. **Sharif N**, Dey SK. Environmental Factors Associated with Global Pandemic Transmission and Morbidity. In Integrated Science of Global Epidemics. Cham: Springer International Publishing, Switzerland. 2023;May 9:pp. 287-306.
3. **Sharif N**, Ahmed SN, Dey SK. Detection and diagnosis of mycobacterial pathogens using PCR. Encyclopedia of Infection and Immunity. Elsevier. Amsterdam, Netherlands. 2022;4:pp.301-309.
4. Khan FH, **Sharif N**, Acharjee P, Munira R, Jahan N, Akter F, Sarkar MK, Talukder AA, Dey SK. Burden of rotavirus accomplished disease and genome diversity of rotavirus in Asia and its distribution in Asia continent. In L. V. Berhardt (Ed.), Advances in Medicine and Biology. Nova Science Publishers, Inc. New York, USA. 2020.
5. Rezaei N, Saghazadeh A, Jraifi A, Siani A, Arredondo AM, Onoja AB, Hamada A, Darouichi A, Son BW, Casais B, Zhou B…. **Sharif N…** Integrated Science of Global Epidemics 2050. In Integrated Science of Global Epidemics. Cham: Springer International Publishing, Switzerland. 2023;May 9:pp. 587-607.

Seminar Articles

1. **Sharif N**, Ahmed SN, Khandaker S, Monifa NH, Parvez AK, Dey SK Molecular epidemiology of rotavirus and prevalence of co-infection of enteropathogenic bacteria among diarrheal children in Bangladesh, 2019-2021. The 14th International Rotavirus Symposium. March 14-16, 2023, Bali, Indonesia.

2. Dey SK, Ahmed SN, Khandaker S, Monifa NH, Talukder AA, Parvez AK, **Sharif N**. Genotypic surveillance and epidemiologic trends of rotavirus infection among children with gastroenteritis in Bangladesh, 2014-2021. The 14th International Rotavirus Symposium. March 14-16, 2023, Bali, Indonesia.
3. Parvez AK, Ahmed SN, Khandaker S, Monifa NH, Talukder AA, **Sharif N**, Dey SK. High sensitivity and specificity of Immunochromatograpghy (i) kit for the rapid identification of rotavirus in Bangladesh. The 14th International Rotavirus Symposium. March 14-16, 2023, Bali, Indonesia.
4. **Sharif N**, Ahmed SN, Khandaker S, Monifa NH, Talukder AA, Parvez AK, Dey SK. Molecular epidemiology of norovirus and prevalence of co-infection among children with gastroenteritis in Bangladesh, 2019-2021. 8th International Calicivirus Conference, 7 - 11 May 2023, Rotterdam, The Netherlands.
5. Dey SK, Ahmed SN, Khandaker S, Monifa NH, Talukder AA, Parvez AK, **Sharif N**. Molecular epidemiology and genetic diversity of norovirus among children with gastroenteritis in Bangladesh, 2014-2021. 8th International Calicivirus Conference, 7 - 11 May 2023, Rotterdam, The Netherlands.
6. Dey SK, Ahmed SN, Khandaker S, Monifa NH, Talukder AA, Parvez AK, **Sharif N**. High sensitivity and specificity of immunochromatograpghy (IC) kit for the rapid identification of norovirus in Bangladesh. 8th International Calicivirus Conference, 7 - 11 May 2023, Rotterdam, The Netherlands.
7. Dey SK, **Sharif N,** Ahmed SN, Parvez AK. Emergence of G2P[4] rotavirus as predominant strain among Bangladeshi pediatric population during 2020-2021. 14th International dsRNA Virus Symposium. 10-14 October 2022. Banff, Alberta, Canada.
8. Dey SK, **Sharif N,** Ahmed SN, Parvez AK. Immunochromatograpghy (IC) kit might be suitable method for the rapid identification of rotavirus in Bangladesh. 14th International dsRNA Virus Symposium. 10-14 October 2022. Banff, Alberta, Canada.
9. Dey SK, **Sharif N**, Nobel NU, Islam NK, Khan ST, Talukder AA. Molecular and epidemiological trend of norovirus infection among infants and children with acute gastroenteritis in Bangladesh. 7th International Calicivirus Conference, 13-17 October 2019, Sydney, Australia.
10. Dey SK, Sifat SF, Almamun M, **Sharif N**, Nobel NU, Sarkar S, Parvez AK, Talukder AA. Comparative evaluation of sensitivity and specificity of Immunocromatography kit for the rapid detection of rotavirus in Bangladesh. 13th Double Stranded RNA virus Symposium, 24-28 September, 2018, Hauffalize, Belgium.
11. Dey SK, Sifat SF, Almamun M, **Sharif N**, Hossain K, Talukder AA, Parvez AK. High prevalence of of rotavirus infection will be alarming for Bangladeshi pediatric population. 13th International Rotavirus Symposium, 29-31 August, 2018, Minsk, Belarus.

Research Articles Under Consideration

- **Sharif N** & Dey SK. Impact of COVID-19 pandemic on the psychological health of general people in Bangladesh: a nationwide cross-sectional study. *Scientific Reports.* 2025. [Under review].

Ongoing projects

- Molecular Characterization of Multidrug Resistance *Acinetobacter baumannii* in Bangladesh.
- Molecular determinants of spatiotemporal changes of microbial communities in a complex microbiota.
- Molecular pathogenesis and genomic analysis of dengue viruses in Bangladesh.
- Development and evaluation of a rapid immunochromatography kit for simultaneous detection of rotavirus and norovirus.
- Role of gut microbiota in the regulation of innate and adaptive immunity.
- Epidemiology of emerging and re-emerging infectious diseases.

- Phenotypic and genotypic characterization of antimicrobial resistance microbes in clinical and environmental settings.

AWARDED RESEARCH FUNDINGS

- **JU and UGC Research Grant of 2024-2025:** Molecular Characterization of Resistance Genes among Multidrug Resistance *Acinetobacter baumannii* Isolated from Hospital Wastewater, Bangladesh. PI (1500 USD).
- **SNT Research Grant, 2024-2025:** Genomic variation of dengue viruses and associated immune factors in selected populations in Bangladesh. CO-PI (4500 USD).
- **JU and UGC Research Grant of 2023-2024:** Prevalence and impact of long COVID-19 among patients with pre-existing comorbidities in Bangladesh. PI (1000 USD).
- **JU and UGC Research Grant of 2022-2023:** Molecular and epidemiologic analysis of antibiotic-resistant bacterial pathogens among children with acute gastroenteritis in Bangladesh. PI (1000 USD).
- **JU and UGC Research Grant of 2021-2022:** Molecular analysis and genotypic surveillance of antibiotic resistance determinants of bacteria among children with gastroenteritis in Bangladesh. PI (1000 USD).
- **SNT Research Grant, 2023-2024:** Genetic diversity of dengue and chikungunya viruses and associated immune factors in the clinical outcomes of selected populations in Bangladesh. CO-PI (5500 USD).
- **SNT Research Grant, 2022-2023:** Development of rapid molecular detection method and genetic characterization of Dengue virus to prevent outbreaks in Dhaka, Bangladesh. CO-PI (5000 USD).

EDITORIAL & REVIEWER ACTIVITIES

Nature Medicine, Journal of Medical Virology, Frontiers in Microbiology, Frontiers in Public Health, PLOS ONE, Heliyon, JMIR, Epidemiology and Infection, Frontiers in Neurology, Globalization and Health, Scientific Reports, BMJ Public Health, Human Vaccines & Immunotherapeutics, Infectious Diseases of Poverty, International Journal of Surgery, Rapid Reviews\Infectious Diseases by MIT.

MS THESIS

- Molecular Epidemiology and Genetic Characterization of Diarrheal Pathogens among Children and Rapid Identification of Rotavirus and Norovirus by Immunochromatography (IC) Kit in Bangladesh.

SCHOLARSHIPS & AWARDS

- Travel Award, The 14th International Rotavirus Symposium, (2023) Bali, Indonesia.
- Poster Award, The 14th International dsRNA Virus Symposium, (2022) Alberta, Canada.
- National Science & Technology (N.S.T.) Fellowship (2017) for M.Sc. Research, BD.
- Government Talent-pool Scholarship for outstanding performance in M.Sc. (2018), JU, BD.
- Regular Merit-Based Annual Scholarships for outstanding performance in BSc. (2013-2016) from JU, BD.
- Education Board Scholarship, for Higher Secondary (HSC) Result, BD.
- Education Board Scholarship, for Secondary School (SSC) Result, BD.

TRAINING & WORKSHOP

- **Faculty Training Program**: Organized by the IQAC Jahangirnagar University (2024).
- **Teacher's Induction Program** on Tools for Quality Improvement. Organized by the Institutional Quality Assurance Cell (IQAC) of Jahangirnagar University (2022).
- **International Seminar on Biosafety and Biosecurity**: Organized by the International Federation of Biosafety Associations, Dhaka, Bangladesh (2019).

- **International Workshop on DNA Barcoding:** Organized by the DNA Barcode Laboratory, Jahangirnagar University (2018).
- **Internship on R&D of Pharmaceutical Products**: Renata Pharmaceutical, Dhaka, BD (2018).

SUPERVISOR ROLES

- **M.Sc. (2023-2024):** Jannatin Naim (Project Title: Molecular Assessment of Resistance Genes among Multidrug Resistance *Acinetobacter baumannii* Isolated from Hospital Wastewater)..
- **M.Sc. (2023-2024):** Abdullah Ibna Masud (Project Title: Genetic Characterization and Molecular Epidemiology of Rotavirus Isolated from Wastewater in Bangladesh).
- **M.Sc. (2022-2023):** Tama Saha (Project Title: Prevalence of ChAdOx1 nCoV-19 Vaccine Associated Side Effects and Clinical Features of Co-infection of Dengue and COVID-19 among the Residents in Dhaka, Bangladesh during 2021-2023).
- **M.Sc. (2022-2023):** Rubayet Rayhan Opu (Project Title: Antimicrobial Resistance Pattern and Molecular Characterization of *Escherichia coli, Vibrio cholerae, Salmonella* spp., and *Shigella* spp. Isolated from Environmental Water Sources in Savar, Bangladesh).
- **M.Sc. (2021-2022):** Nuzhat Haq (Project Title: Molecular Epidemiology and Antibiotic Resistance Pattern of *Escherichia coli* and *Vibrio cholerae* among Children with Diarrhea in Bangladesh, 2021-2022).

TEACHING COURSES

- **B.Sc. 1st Year:** Microbial Ecology (Microb. 102, 3.0 credit).
- **B.Sc. 2nd Year:** Environmental Microbiology (Microb. 201, 4.0 credit); Pharmaceutical Microbiology (Microb. 208, 2 credit).
- **B.Sc. 3rd Year:** Basic Bioinformatics (Microb. 301, 3.0 credit); Industrial Microbiology and Biotechnology (Microb. 303, 3.0 credit); Enzymology (Microb. 306, 2.0 credit).
- **B.Sc. 4th Year:** Quality Control and Assurance in Food and Pharmaceutical Industries (Microb. 408, 3.0 credit); Antibiotics: Mechanism of Action and Bacterial Resistance (Microb. 408, 4.0 credit).

ADMINISTRATIVE EXPERIENCE

- **Assistant Proctor**, Proctorial Body, Jahangirnagar University [November 2022- October 2024].
- **Assistant House Tutor**, SSB Hall, Jahangirnagar University [September 2021-present].

MEMBERSHIP

- Global Outreach Member, American Society of Microbiology, USA [2021-present].
- General Member, Microbiology Society, UK [2022-present].

EXTRACURRICULAR ACTIVITIES

- **Volunteer** work for teaching English and Biology to underprivileged children [2019-present].
- **Organizer** of campaigns to raise health awareness among the residents in Bangladesh [2022-present].
- **Sports Teacher**, Department of Microbiology, JU, BD [2021-present].