Md Sohidul Islam

PhD | Professor of Biochemistry and Biotechnology

Department of Biochemistry and Biotechnology, School of Health and Life Sciences
North South University, Dhaka, Bangladesh

SAC 805, Plot 15, Block B, Bashundhara R/A, Dhaka 1229
sohidul.islam@northsouth.edu | +880 2 55668200 ext 1921 | +880 174 305 3443

Updated 13 October 2026

Academic Profile

Professor and molecular microbiologist working on antimicrobial resistance, bacterial pathogenesis, comparative genomics, and microbial transcriptomics. Research experience includes clinical bacteriology at Karolinska Institutet, host–pathogen interaction research at the Universities of Arizona and Florida, and teaching and research supervision at North South University since 2010. Former Chairman of the Department of Biochemistry and Microbiology, with teaching across biochemistry, molecular genetics, cell biology, and biomedical sciences.

Academic and Research Appointments

September 2026–present | Professor, Department of Biochemistry and Biotechnology, North South University, Dhaka, Bangladesh.

May 2019–August 2026 | Professor, Department of Biochemistry and Microbiology, North South University.

March 2015–April 2019 | Associate Professor, Department of Biochemistry and Microbiology, North South University.

May 2010–March 2015 | Assistant Professor, Department of Biochemistry and Microbiology, North South University.

January–May 2010 | Assistant Professor, part-time, Department of Biochemistry and Microbiology, North South University.

January–October 2009 | Postdoctoral Associate, Department of Molecular Genetics and Microbiology, University of Florida, Gainesville, USA. Laboratory of Jorge A. Girón.

April–December 2008 | Postdoctoral Associate, Department of Immunobiology, University of Arizona, Tucson, USA. Laboratory of Jorge A. Girón.

January 2000–June 2001 | Research Associate, Immunology Laboratory, Laboratory Science Division, International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b), Dhaka.

Academic Leadership and Service

Current service | Vice-Chair, NSU Institutional Animal Care and Use Committee (IACUC), NSU

Current service | Member, School of Health and Life Sciences Scientific Review Committee, NSU

May 2016–July 2020 | Chairman, Department of Biochemistry and Microbiology, NSU.

Researcher Profiles

ORCID: https://orcid.org/0000-0003-4003-2544
Scopus Author ID: 14064891600
Google Scholar: https://scholar.google.com/citations?user=S-vNwWIAAAAJ
Faculty profile: https://www.northsouth.edu/faculty-members/shls/bbt/sdl.html

Education

PhD in Bacteriology and Microbiology | Karolinska Institutet, Stockholm, Sweden. Awarded March 2008.

Dissertation: *Chromosomal Antibiotic Resistance Mechanisms in Pseudomonas aeruginosa and Neisseria gonorrhoeae*.

MSc in Biochemistry | University of Dhaka, Bangladesh. 1997; degree awarded in 2000. First Class, seventh position.

BSc in Biochemistry | University of Dhaka, Bangladesh. 1996; degree awarded 1998. First Class, eleventh position.

Higher Secondary Certificate in Science | Dinajpur Government College, Bangladesh, 1993. First Division.

Secondary School Certificate in Science | Dinajpur Zilla School, Bangladesh, 1991. First Division.

Teaching and Research Supervision

Teaching at North South University since January 2010, with supervision of undergraduate research projects and graduate dissertations.

Courses and Teaching Areas

- Biochemistry and chemistry: Introduction to Biochemistry and Biotechnology Laboratory; Bio-organic Chemistry I and II; Chemistry of Natural Products.
- Molecular and cellular sciences: Molecular Genetics; Human Molecular Genetics; Cell Biology; Microbial Biotechnology.
- Biomedical sciences: Clinical Biochemistry; Human Physiology; Endocrinology; Neurochemistry.

Teaching Contributions

- Supervision of student research in microbiology, antimicrobial resistance, genomics and natural products, and guidance of undergraduate projects and graduate dissertations.
- Development of lecture materials and assessment resources for clinical biochemistry, diagnostic enzymology and molecular genetics.

Courses by Appointment Period

Professor, May 2019–present | Molecular Genetics, Cell Biology, Chemistry of Natural Products, Clinical Biochemistry & Xenobiotics, Neurochemistry and Genes and Diseases; research supervision.

Associate Professor, March 2015–April 2019 | Bio-organic Chemistry II, Molecular Genetics, Endocrinology, Cell Biology, Chemistry of Natural Products and Microbial Biotechnology; research supervision.

Assistant Professor, May 2010–March 2015 | Introduction to Biochemistry and Biotechnology Laboratory, Bio-organic Chemistry I and II, Human Physiology, Molecular Genetics, Endocrinology, Cell Biology and Neurochemistry; research supervision.

Part-time Assistant Professor, January–May 2010 | Introduction to Biochemistry and Biotechnology Laboratory, Human Physiology and Molecular Genetics.

Research Experience and Current Interests

North South University

- Molecular mechanisms of antimicrobial resistance in clinical and environmental bacteria, with whole-genome sequencing and comparative analysis of resistance and virulence genes.
- Efflux-mediated resistance in Gram-negative bacteria, including *Pseudomonas aeruginosa*, and genomic characterization of multidrug-resistant *Acinetobacter baumannii* and other bacterial isolates.
- Bacterial transcriptomics and differential gene expression in response to antibiotic exposure; biofilm biology and toxin–antitoxin systems.
- Bacteriophage and prophage genomics, including mobile genetic elements associated with *Citrobacter freundii* and *Stenotrophomonas maltophilia*.
- Foodborne pathogens and antimicrobial resistance; antimicrobial and antioxidant activities of locally available natural products.
- Computational studies of candidate gene variants, protein structure and molecular interactions in cancer and cardiovascular disease.
- Current literature and comparative genomics interests include bacterial copper resistance, its regulatory mechanisms and relationship with antibiotic resistance, and toxin–antitoxin systems in *Serratia marcescens*.

Postdoctoral Research in the United States

University of Arizona and University of Florida, 2008–2009. Studied adherence factors, autotransporters, and pili biogenesis in enteroaggregative *Escherichia coli*, including bacterial attachment and cytotoxicity in cell-line models, mammalian cell receptors, recombinant protein cloning, expression and purification, and molecular and proteomic approaches. Applied immunofluorescence and immunoelectron microscopy, including transmission and scanning electron microscopy, to characterize host–pathogen interactions.

Doctoral Research at Karolinska Institutet

Investigated chromosomal antimicrobial resistance in *Neisseria gonorrhoeae* and *Pseudomonas aeruginosa*, focusing on fluoroquinolone resistance in clinical gonococcal isolates and aminoglycoside and carbapenem resistance in isolates from patients with cystic fibrosis.

Research at icddr b

Studied pathogens and immune responses in children younger than three years with acute lower respiratory tract infections. Work included bacterial identification from blood and nasopharyngeal aspirates, immunological assays, development of PCR assays for detection of *Streptococcus pneumoniae* and *Haemophilus influenzae*, and ELISA-based investigation of viral agents.

Research Funding and Academic Awards

2025–2026 | Ministry of Science and Technology, Bangladesh. Associate Investigator. "Characterizing Genomic Traits of Lead-Resistant Bacteria from Battery-Polluted Soils for Sustainable Bioremediation." Project ID SRG-253442.

2023–2024 | NSU CTRG Faculty Research Grant. Principal Investigator (PI). "Characterization of Multidrug Efflux Pumps as Therapeutic Targets in *Acinetobacter baumannii* from Bangladesh." Project ID CTRG-23-SHLS-30

2022–2024 | Ministry of Education, Bangladesh. Co-Principal Investigator (Co-PI). "Investigation of Ciprofloxacin-Induced Neurotoxicity in Naproxen-Mediated Renal Condition: An in Silico and *in vivo* Approach."

2022–2023 | Ministry of Science and Technology, Bangladesh. Principal Investigator (PI) "Exploration of Toxin-Antitoxin Systems in *Acinetobacter baumannii*." R&D grant, Biology, Medical Science and Nutrition Science Group.

2021–2022 | Ministry of Health. Co-Principal Investigator (Co-PI). "Characterization of Gut Microbiota for Brain Development in Bangladeshi Children from the Coastal Region: A 16S Metagenomic Study."

2021–2022 | NSU CTRG Faculty Research Grant. Principal Investigator (PI). "Transcriptome Study of Carbapenem-Resistant *Acinetobacter baumannii* Clinical Isolates." Project ID CTRG-21-SHLS-17.

2018–2019 | NSU CTRG Faculty Research Grant. Principal Investigator (PI). "Molecular Mechanism of Multidrug Resistance in Hypermutable Bacteria Isolated from ICU Patients." Project ID NSU-RP-18-057.

2016–2017 | Ministry of Education, Bangladesh. Co-Principal Investigator (Co-PI). "Evaluation of Lead-Induced Neurotoxicity in Mouse Brain and Other Tissues." In collaboration with the Department of Biochemistry & Molecular Biology, University of Dhaka.

Academic Awards

1997–1998 | Scholarship for outstanding academic results, Department of Biochemistry and Molecular Biology, University of Dhaka.

Doctoral Funding

Karolinska Institutet and AFA Health Agency, Sweden.

Research Methods and Technical Experience

- Microbial isolation and identification, antimicrobial susceptibility assessment and investigation of resistance mechanisms.
- Whole-genome sequencing data analysis, comparative bacterial genomics, resistance and virulence gene characterization, and phage and prophage analysis.
- Transcriptomics and gene-expression interpretation; PCR, molecular cloning, recombinant protein expression and purification.
- Cell-line models of bacterial adherence and cytotoxicity; immunological assays, ELISA, immunofluorescence and electron microscopy.
- Computational analysis of gene variants, protein structure and interactions; phytochemical, antimicrobial and antioxidant investigations.

Journal Articles

Chicago bibliography adapted to list every author. Entries are numbered from earliest to latest and displayed with the newest years first.

37. Latif, Samira, Shakib Ahmed, Protik Dutta, Sabbir Rahman Shuvo, **Sohidul Islam**, and Ishrat Jabeen. "Preliminary Phytochemical Screening and Antibacterial Activities of Selected Medicinal Plants from Dhaka." *Microbiology and Biotechnology Letters* 54 (2026): e2511018. https://doi.org/10.48022/mbl.2511.11018.

36. Anjum, Afia, Zuhayr Mahtab, Sattajith Roy, Jarin Tabassum, Ishrat Jabeen, **Sohidul Islam**, and Sabbir Rahman Shuvo. "Genome-Wide Comparative and Taxonomic Characterization of Prophages in *Stenotrophomonas maltophilia*." *Archives of Microbiology* 208 (2026): 296. https://doi.org/10.1007/s00203-026-04861-2.

35. Mahtab, Zuhayr, Fahmida Haque Tamanna, Ishrat Jabeen, **Sohidul Islam**, Sezanur Rahman, Mustafizur Rahman, and Sabbir Rahman Shuvo. "Complete Genome Sequence of *Pseudomonas aeruginosa* Bacteriophage PaFZ4 Isolated from Dhaka, Bangladesh." *Microbiology Resource Announcements* 14, no. 12 (2025): e00993-25. https://doi.org/10.1128/mra.00993-25.

34. Dutta, Protik, **Sohidul Islam**, Kaniz Fatema, Ishrat Jabeen, Gawhar Fariha Tasneem, Arafa Omar, Silvi Ifrat Jahan, Munmun Faria Iqbal, Abdul Khaleque, and Sabbir Rahman Shuvo. "Prevalence of β-Lactamase Producing Gram-Negative Bacteria in Ready-to-Eat Vegetables and Herbs from Dhaka City." *Microbiology and Biotechnology Letters* 53, no. 3 (2025): 396–404. https://doi.org/10.48022/mbl.2507.05004.

33. Ferdous, Sadia, K. M. Shayerul Abedin Shayer, Afia Anjum, Sabbir Rahman Shuvo, Ishrat Jabeen, Kristi Paul Hridi, A.K.M. Imrul Hassan, Md Imran Khan, Mohammad Fazle Alam Rabbi, Mahmud Hossain, Kazi Nadim Hasan, and **Sohidul Islam**. "Genomic Insights into Multidrug-Resistant *Acinetobacter baumannii* Strains Isolated from Dhaka, Bangladesh." *Journal of Advanced Biotechnology and Experimental Therapeutics* 8, no. 1 (2025): 64–78. https://doi.org/10.5455/jabet.2025.06.

32. Hossain, Mahmud, Rezowana Mannan, **Sohidul Islam**, Laila A. Banu, Ahsan Rahman Jamee, Zahid Hassan, Sabrina Moriom Elias, Sanjan K. Das, and A. K. Azad Khan. "Unveiling the Occurrence of COVID-19 in a Diverse Bangladeshi Population during the Pandemic." *Frontiers in Public Health* 12 (2024): 1363971. https://doi.org/10.3389/fpubh.2024.1363971.

31. Hasan, Subbrina, Zimam Mahmud, Mahmud Hossain, and **Sohidul Islam**. "Harnessing the Role of Aberrant Cell Signaling Pathways in Glioblastoma Multiforme: A Prospect towards the Targeted Therapy." *Molecular Biology Reports* 51 (2024): 1069. https://doi.org/10.1007/s11033-024-09996-3.

30. Tabassum, Jarin, Afia Anjum, **Sohidul Islam**, Abdul Khaleque, Ishrat Jabeen, and Sabbir Rahman Shuvo. "Draft Genome Sequencing Data of Multidrug-Resistant *Staphylococcus haemolyticus* from Bangladeshi Hospitals." *Data in Brief* 57 (2024): 110918. https://doi.org/10.1016/j.dib.2024.110918.

29. Shayer, K. M. Shayerul Abedin, Sabbir Rahman Shuvo, Ishrat Jabeen, Mahmud Hossain, and **Sohidul Islam**. "Draft Genome Sequence Data of *Serratia marcescens* Strain Harboring blaNDM-7 from Dhaka, Bangladesh." *Data in Brief* 57 (2024): 111133. https://doi.org/10.1016/j.dib.2024.111133.

28. Anjum, Afia, Jarin Tabassum, **Sohidul Islam**, A. K. M. Imrul Hassan, Ishrat Jabeen, and Sabbir Rahman Shuvo. "Deciphering the Genomic Character of the Multidrug-Resistant *Staphylococcus aureus* from Dhaka, Bangladesh." *AIMS Microbiology* 10, no. 4 (2024): 833–58. https://doi.org/10.3934/microbiol.2024036.

27. Jabeen, Ishrat, S. M. Iqbal Mahamud, **Sohidul Islam**, Anika Bushra Lamisa, Afia Anjum, Sumaiya Hossain Oishy, and Sabbir Rahman Shuvo. "Genomic Identification and Characterization of Prophages Associated with *Citrobacter freundii* Strains." *Journal of Advanced Biotechnology and Experimental Therapeutics* 6, no. 3 (2023): 648–58. https://doi.org/10.5455/jabet.2023.d156.

26. Zahra, Fatimah Az, Ishrat Jabeen, Mohammed Jafar Uddin, Nazmun Nahar, **Sohidul Islam**, and Sabbir Rahman Shuvo. "Genomic Analysis to Elucidate the Antibiotic Resistance Mechanism of Extremely Drug-Resistant *Pseudomonas aeruginosa* Strains Isolated from Bangladesh." *Bioresearch Communications* 9, no. 1 (2023): 1208–14. https://doi.org/10.3329/brc.v9i1.63601.

25. Jabeen, Ishrat, **Sohidul Islam**, A. K. M. Imrul Hassan, Zerin Tasnim, and Sabbir Rahman Shuvo. "A Brief Insight into Citrobacter Species—A Growing Threat to Public Health." *Frontiers in Antibiotics* 2 (2023): 1276982. https://doi.org/10.3389/frabi.2023.1276982.

24. Khan, Adittya Sabhayasachi, Rezowana Mannan, Laila Anjuman Banu, **Sohidul Islam**, and Mahmud Hossain. "Green Tea Augments Cognitive Function: An in Silico Model." *Bioresearch Communications* 8, no. 2 (2022): 1113–23.

23. Ananna, Sanjida Bari, **Sohidul Islam**, Ishrat Jabeen, Ishtiaque Ahammad, S. M. Mostofa Kamal, Mohammad Shamim Hossain, S. M. Mostafa Kamal Khan, and Mahmud Hossain. "Detection of Multi-Drug-Resistance (MDR) *Mycobacterium tuberculosis* among Suspected Tuberculosis Patients in Bangladesh Using Line Probe Assay." *Bioresearch Communications* 8, no. 2 (2022): 1149–55.

22. Ahammad, Ishtiaque, Md Rafiul Islam Sarker, Akib Mahmud Khan, **Sohidul Islam**, and Mahmud Hossain. "Virtual Screening to Identify Novel Inhibitors of Pan ERBB Family of Proteins from Natural Products with Known Anti-Tumorigenic Properties." *International Journal of Peptide Research and Therapeutics* 26, no. 4 (2020): 1923–38. https://doi.org/10.1007/s10989-019-09992-3.

21. Sharmin, Ayesha, Md Abdul Hai, Md Mainul Hossain, Mohammad Moshiur Rahman, Md Baki Billah, **Sohidul Islam**, Mohammad Jakariya, and Garon C. Smith. "Reducing Excess Phosphorus in Agricultural Runoff with Low-Cost, Locally Available Materials to Prevent Toxic Eutrophication in Hoar Areas of Bangladesh." *Groundwater for Sustainable Development* 10 (2020): 100348. https://doi.org/10.1016/j.gsd.2020.100348.

20. Rahman, A. S. M. Zisanur, Arittra Bhattacharjee, Abdullah All Jaber, Maqsud Hossain, Kazi Nadim Hasan, **Sohidul Islam**, and Zaied Ahmed Bhuyan. "High-Risk Non-Synonymous SNPs of Human Bcl-2 Gene Alters Structural Stability and Small Molecule Binding." *Bioresearch Communications* 6, no. 1 (2020): 791–800.

19. Parvez, Md Anowar Khasru, Karabi Saha, Juairia Rahman, Rahath Ara Munmun, Md Atikur Rahman, Shuvra Kanti Dey, Md Shahedur Rahman, **Sohidul Islam**, and Mohammad Hossain Shariare. "Antibacterial Activities of Green Tea Crude Extracts and Synergistic Effects of Epigallocatechingallate (EGCG) with Gentamicin against MDR Pathogens." *Heliyon* 5, no. 7 (2019): e02126. https://doi.org/10.1016/j.heliyon.2019.e02126.

18. Fatema, Kamrun Nahar, Mohammad Ibrahim, Md Omar Faruk, **Sohidul Islam**, Mouly Tabassum, Mrityunjoy Biswas, Md Sani Anam Chowdhury, Abdul Khaleque, Suma Mita Biswas, Rummana Rahim, and Tareak-al Nasir. "Vitamin D Status and Its Relation with Bone Pain in Adult Bangladeshi Women: A Study at a JCI Accredited Hospital in Bangladesh." *European Journal of Biomedical and Pharmaceutical Sciences* 5 (2018): 1009–16.

17. Hossain, Maqsud, Munirul Alam, Abdul Khaleque, **Sohidul Islam**, Abdus Sadique, Nayeim Khan, Zahra Halim, Mrinmoy Sarker, Najib M. El-Sayed, Anwar Huq, Gias Uddin Ahsan, and Rita Rossi Colwell. "Virulence-Related Genes Identified from the Genome Sequence of the Non-O1/Non-O139 *Vibrio cholerae* Strain VcN1, Isolated from Dhaka, Bangladesh." *Genome Announcements* 6, no. 10 (2018): e01513-17. https://doi.org/10.1128/genomeA.01513-17.

16. Hossain, Md. Jakir, Shashwata Biswas, Mohammad Shahriar, Maisha Mosharrat Chowdhury, **Sohidul Islam**, and Chowdhury Rafiqul Ahsan. "Phytochemical Screening, Antimicrobial Activity, Antioxidant Capacity and in Vivo Anticancer Activity of *Lannea coromandelica* Bark Extracts." *IOSR Journal of Pharmacy and Biological Sciences* 13, no. 3, version II (2018): 19–25. https://doi.org/10.9790/3008-1303021925.

15. Jain, Mukesh, **Sohidul Islam**, A. S. M. Zisanur Rahman, Sharmin Akhtar, Kazi Nadim Hasan, Gias Uddin Ahsan, Abdul Khaleque, and Maqsud Hossain. "Molecular Analysis of Hemagglutinin, Neuraminidase, Matrix Genes Provide Insight into the Genetic Diversity of Seasonal H3N2 Human Influenza A Viruses in Bangladesh during July–August, 2012." *VirusDisease* 29, no. 1 (2018): 54–60. https://doi.org/10.1007/s13337-018-0431-y.

14. Hossain, Md Jakir, Shashwata Biswas, Mohammad Shahriar, **Sohidul Islam**, and Chowdhury Rafiqul Ahsan. "In Vivo Anticancer Activity on Ehrlich Ascites Carcinoma (EAC) Cells and in Vitro Antimicrobial Activity of *Psidium guajava* Bark Extracts." *Bangladesh Journal of Microbiology* 35, no. 1 (2018): 79–81.

13. Parvez, Md Anowar Khasru, Rabeya Nahar Ferdous, Md Shahedur Rahman, and **Sohidul Islam**. "Healthcare-Associated (HA) and Community-Associated (CA) Methicillin Resistant *Staphylococcus aureus* (MRSA) in Bangladesh–Source, Diagnosis and Treatment." *Journal of Genetic Engineering and Biotechnology* 16, no. 2 (2018): 473–78. https://doi.org/10.1016/j.jgeb.2018.05.004.

12. Chowdhury, Abhinandan, **Sohidul Islam**, and Ramen Chowdhury. "Antibacterial Activity of Bangladeshi Raw and Commercial Honey against *Staphylococcus aureus*." *Novel Approaches in Drug Designing & Development* 4, no. 1 (2018): 555626. https://doi.org/10.19080/NAPDD.2018.04.555626.

11. Hasan, Kazi Nadim, Md Abdul Khaleque, Nahian Anjum Shejuti, Tanzila Wasi, and **Sohidul Islam**. "Prevalence of Hepatitis B Virus Seromarkers and Associated Risk Factors in Young Healthy Individuals in Bangladesh: Implications for Preventive Strategies." *Hepatitis Monthly* 17, no. 6 (2017): e14245. https://doi.org/10.5812/hepatmon.14245.

10. **Islam, Sohidul**, Obaidur Rahman, Mahmud Hossain, and Abdul Khaleque. "Antioxidant Activity of Some Common Seasonal Fruits of Bangladesh." *Bioresearch Communications* 1, no. 1 (2015): 28–31.

9. **Islam, Sohidul**, Lamyah Sultana Meem, Kazi Nadim Hasan, M. Abdul Khaleque, and Obaidur Rahman. "Multidrug Resistance of *Pseudomonas aeruginosa* Isolated from Burn Patients." *Bangladesh Journal of Medical Science* 18, no. 2 (2012): 132–34.

8. Rahman, Obaidur, Kazi Nadim Hasan, Md Abdul Khaleque, Ishrat Jabeen, and **Sohidul Islam**. "Dietary Intake of Urea from Puffed Rice (Muri) in Bangladesh." *Bangladesh Journal of Medical Science* 18, no. 1 (2012): 58–61.

7. Hasan, Kazi Nadim, Fahmida Nasrin, M. Abu Taher, Sharif Neaz, **Sohidul Islam**, Obaidur Rahman, Israt Jabeen, M. Abdul Khaleque, and Sharif Akhteruzzaman. "Comparative Analysis of Hepatitis C Virus (HCV) RNA, Anti-HCV and Liver Transaminase Levels as Markers and Predictors of Infectivity in HCV Infection." *Bangladesh Journal of Medical Science* 18, no. 2 (2012): 120–25.

6. Avelino, Fabiola, Zeus Saldaña, **Sohidul Islam**, Valerio Monteiro-Neto, Monique Dall'Agnol, Carlos A. Eslava, and Jorge A. Girón. "The Majority of Enteroaggregative *Escherichia coli* Strains Produce the *E. coli* Common Pilus When Adhering to Cultured Epithelial Cells." *International Journal of Medical Microbiology* 300, no. 7 (2010): 440–48. https://doi.org/10.1016/j.ijmm.2010.02.002.

5. Andrésen, Cecilia, Shah Jalal, Daniel Aili, Yi Wang, **Sohidul Islam**, Anngelica Jarl, Bo Liedberg, Bengt Wretlind, Lars-Göran Mårtensson, and Maria Sunnerhagen. "Critical Biophysical Properties in the *Pseudomonas aeruginosa* Efflux Gene Regulator MexR Are Targeted by Mutations Conferring Multidrug Resistance." *Protein Science* 19, no. 4 (2010): 680–92. https://doi.org/10.1002/pro.343.

4. **Islam, Sohidul**, H. Oh, Shah Jalal, Ferenc Karpati, Oana Ciofu, Niels Høiby, and Bengt Wretlind. "Chromosomal Mechanisms of Aminoglycoside Resistance in *Pseudomonas aeruginosa* Isolates from Cystic Fibrosis Patients." *Clinical Microbiology and Infection* 15, no. 1 (2009): 60–66. https://doi.org/10.1111/j.1469-0691.2008.02097.x.

3. Farra, Anna, **Sohidul Islam**, Annelie Strålfors, Mikael Sörberg, and Bengt Wretlind. "Role of Outer Membrane Protein OprD and Penicillin-Binding Proteins in Resistance of *Pseudomonas aeruginosa* to Imipenem and Meropenem." *International Journal of Antimicrobial Agents* 31, no. 5 (2008): 427–33. https://doi.org/10.1016/j.ijantimicag.2007.12.016.

2. Lindbäck, Emma, **Sohidul Islam**, Magnus Unemo, Camilla Lang, and Bengt Wretlind. "Transformation of Ciprofloxacin-Resistant *Neisseria gonorrhoeae* gyrA, parE and porB1b Genes." *International Journal of Antimicrobial Agents* 28, no. 3 (2006): 206–11. https://doi.org/10.1016/j.ijantimicag.2006.04.003.

1. **Islam, Sohidul**, Shah Jalal, and Bengt Wretlind. "Expression of the MexXY Efflux Pump in Amikacin-Resistant Isolates of *Pseudomonas aeruginosa*." *Clinical Microbiology and Infection* 10, no. 10 (2004): 877–83. https://doi.org/10.1111/j.1469-0691.2004.00991.x.

Book Chapters

2. Sharmin, Ayesha, Md Mainul Huda, Mahabub Islam, Md Mainul Hossain, Garon C. Smith, **Sohidul Islam**, Mohammad Moshiur Rahman, Mohammad Hossain Shahriare, Mohsin Kazi, and Mohammad Jakariya. "Natural Attenuation of Chromium and Manganese from a Bangladesh Tannery Effluent via Humic Substance Complexation: Field, Laboratory and Modeling Studies." In *Water Topos: A 3-D Trend Surface Approach to Viewing and Teaching Aqueous Equilibrium Chemistry*, chap. 2.3. 2021. https://scholarworks.umt.edu/topos/7/

1. Manjur, Omar Hamza Bin, Akib Mahmud Khan, Hamida Nooreen Mahmood, **Sohidul Islam**, and Mahmud Hossain. "Role of Autophagy in Cancer: Mechanistic and Therapeutic Understanding from the Cellular and Molecular Point of View." In *Trends in Biochemistry and Molecular Biology*, edited by Hossain Uddin Shekhar, 233–58. New York: Nova Science Publishers, 2020. https://novapublishers.com/shop/trends-in-biochemistry-and-molecular-biology/.

Conference Publications and Published Abstracts

3. Hasan, Kazi Nadim, Tanzila Wasi, Nahian Anjum Shejuti, Aniqa Afzal, and **Sohidul Islam**. "Comparative Evaluation of Two Rapid Diagnostic Test Devices and Real-Time PCR for the Detection of Hepatitis B Surface Antigens in Human Plasma: Implications in Blood Donation Screening." *Joint International Tropical Medicine Meeting Proceedings* 6 (2017): 17–25.

2. **Islam, Sohidul**, A. Vang, and Bengt Wretlind. "Expression of mexY and Gene PA5471 in Drug-Induced Amikacin Resistant Small Colony Variants of *P. aeruginosa*: O126." *Clinical Microbiology & Infection* 12 (2006). Abstract O126.

1. **Islam, Sohidul**, H. Oh, Shah Jalal, Oana Ciofu, Niels Høiby, and Bengt Wretlind. "Expression of mRNA for Efflux Pump Proteins in *Pseudomonas aeruginosa* Strains from Cystic Fibrosis Patients in Relation to Antibiotic Resistance: P1278." *Clinical Microbiology & Infection Supplement* 11 (2005): 407.

Conference Contributions

Coauthored posters and oral contributions are listed below. Presenting authors are identified when recorded.

2025

Mahtab, Zuhayr, Fahmida Haque, Sohidul Islam, Ishrat Jabeen, and Sabbir Rahman Shuvo. “Genomic Insights into Bacteriophage PaFZ4: A Potential Alternative to Antibiotics for MDR *Pseudomonas aeruginosa*.” Poster, 4th International Electronic Conference on Antibiotics, 21–23 May 2025. https://sciforum.net/paper/22958.

Sultana, Fataha, Jarin Tabassum, Sohidul Islam, Ishrat Jabeen, and Sabbir Rahman Shuvo. “Genetic Insights into *Acinetobacter bereziniae* IJ5: A Comparative Genomics Perspective.” Poster, 4th International Electronic Conference on Antibiotics, 21–23 May 2025. https://sciforum.net/paper/view/22889.

Sultana, Fataha, Jarin Tabassum, Sohidul Islam, Ishrat Jabeen, and Sabbir Rahman Shuvo. “Exploring the Potential Pathogenicity of *Acinetobacter bereziniae* IJ5 through Whole-Genome Analysis.” Poster, 3rd International Conference on Advancement of Life Sciences, MBSTU, 2025.

Mahtab, Zuhayr, Fahmida Haque, Sohidul Islam, Ishrat Jabeen, and Sabbir Rahman Shuvo. “Isolation and Genomic Analysis of Bacteriophage PaFZ4 Targeting Multidrug-Resistant *Pseudomonas aeruginosa*.” Oral contribution, JUST International Conference on Emerging Technologies for Sustainable Development, 2025.

Mahtab, Zuhayr, Fahmida Haque, Ishrat Jabeen, Sohidul Islam, and Sabbir Rahman Shuvo. “Rise of Killer Phage PaFZ4 Against *Pseudomonas aeruginosa*: Genomic Insights into a Natural Assassin.” Three-minute contribution, RMSTU International Bioscience Conference and Carnival, 2025. Presenting author: Zuhayr Mahtab.

Sultana, Fataha, Jarin Tabassum, Zuhayr Mahtab, Sohidul Islam, Ishrat Jabeen, and Sabbir Rahman Shuvo. “The Resistant Chronicles: Genomic Insights from *Acinetobacter bereziniae*.” Poster, RMSTU International Bioscience Conference and Carnival, 2025. Abstract D2-31; presenting author: Zuhayr Mahtab.

Anjum, Afia, Zuhayr Mahtab, Sattajith Roy, Ishrat Jabeen, Sohidul Islam, and Sabbir Rahman Shuvo. “A Multi-Dimensional Genomic Approach in Decoding the Prophage Landscape of *Stenotrophomonas maltophilia*.” Oral contribution, RMSTU International Bioscience Conference and Carnival, 2025. Abstract TS5C-OP6; presenting author: Zuhayr Mahtab.

2024

Mahtab, Zuhayr, Fahmida Haque, Sohidul Islam, Ishrat Jabeen, and Sabbir Rahman Shuvo. “Genomic Characterization of Bacteriophage PaFZ4 Infecting Multidrug-Resistant *Pseudomonas aeruginosa*.” Poster, 38th Annual Conference of the Bangladesh Society of Microbiologists, BRAC University, 2024. Abstract AMA-P16.

Earlier Conference Participation

2022 | International Conference on Genomics, Nanotech and Bioengineering.

2017 | International Conference on Genomics, Nanotech and Bioengineering.

2016 | Joint International Tropical Medicine Meeting.

2006 | 16th European Congress of Clinical Microbiology and Infectious Diseases, Nice, France, 1–4 April. Oral presentation; abstract O126.

2005 | 15th European Congress of Clinical Microbiology and Infectious Diseases, Copenhagen, Denmark, 2–5 April. Poster presentation; abstract 1134_03_48.

2003 | 103rd General Meeting of the American Society for Microbiology, Washington, DC, USA, 18–22 May. Poster A-149.

2002 | 12th European Congress of Clinical Microbiology and Infectious Diseases, Milan, Italy. Poster; abstract P1072.

Professional Training and Certificates

2009 | Shipping and Transport of Biological Materials, University of Florida.

2005 | Methods and Applications in Molecular Biology and Biotechnology, Karolinska Institutet (2 credits).

2005 | Molecular Techniques in Biology with Special Focus on Microarray Technique, Karolinska Institutet (2 credits).

2005 | Molecular Methods Used in the Control of Hospital Infections, Karolinska Institutet (1 credit).

2004 | Laboratory Animal Science, Karolinska Institutet (3 credits).

2004 | Ecology and the Importance of Indigenous Flora, Karolinska Institutet (1 credit).

2004 | Bioinformatics on the Internet: Introduction for Molecular Biologists, Karolinska Institutet (1 point).

2003 | Novel Practical Biotechnology, Karolinska Institutet (1 credit).

2003 | Core Courses in General Science, Karolinska Institutet (5 credits).

2002 | Immunology Basic Course, Karolinska Institutet (1 credit).

2002 | Basic Course in Clinical Bacteriology, Karolinska Institutet (5 credits).

Professional Memberships

American Society for Microbiology
Graduate Biochemists Association, Bangladesh
Bangladesh Biosafety and Biosecurity Association
Bangladesh Society for Biochemistry and Molecular Biology
Dhaka University Alumni Association

Correspondence Address

51/D-1 Barabagh, Shinepukur, first floor, Mirpur 2, Dhaka 1216, Bangladesh.