

Resume of Dr. Sunjukta Ahsan

Academic Qualifications

PhD in Genetics (University of Cambridge, UK), MS in Environmental Science, (University of Sydney, Australia), MSc and BSc in Microbiology (University of Dhaka, Bangladesh)



Present Position

Professor (full-time) in the Department of Microbiology, University of Dhaka, Bangladesh from 26th December, 2018 to date.

Previous Professional Experience

Organization	Designation	Duration of service
Department of Microbiology, University of Dhaka, Bangladesh	Professor	26 th December 2019 to date
Department of Microbiology, University of Dhaka, Bangladesh	Associate Professor	April 12 th 2015 to 25 th December 2018
Department of Microbiology, University of Dhaka, Bangladesh	Assistant Professor	February 1 st 2012 to 11 th April 2015
Department of Microbiology, University of Dhaka, Bangladesh	Lecturer	3 rd July 2004 to 31 st January 2012
Enteric Bacteriology Laboratory, LSD, ICDDR, B	Research Officer	April 1 st to June 30 th , 2004
Enteric Bacteriology Laboratory, LSD, ICDDR, B	Research Fellow	March 1 st to March 31 st , 2004
Environmental Microbiology Laboratory, LSD, ICDDR, B	Research Officer	January 2001 to December 2001

Educational background/ Academic qualifications

Degree	Major Subject studied	Institution Awarding Degree	Duration of Study/ Year of passing	Result/ Mark obtained
PhD	Genetics/ Molecular Biology	Department of Genetics, University of Cambridge, UK	4 Years	Pass*
MS	Applied Science (Thesis in Molecular Microbiology)	University of Sydney, Australia	March, 2002 to March, 2003	80.25%

MSc	Microbiology	University of Dhaka, Bangladesh	1999	1 st Class 1 st position (in order of merit)
BSc	Microbiology	University of Dhaka, Bangladesh	1997	1 st Class 1 st position (in order of merit)

*Title of thesis: Replication and stability functions of the linear plasmid pBSSB2

Award Type	Award Title	Year	Country	Description
International	Cambridge Commonwealth Trust	2011	United Kingdom	Support for continuing PhD research
International	British Federation for Women Graduates	2011	United Kingdom	Support for continuing PhD research
International	Commonwealth Scholarship and Fellowship Plan	2007	Bangladesh	Awarded by the Commonwealth Commission for PhD research
International	AusAID	2002	Australia	Aid to complete MS degree in Australia
National	DU scholarship	1999	Bangladesh	Merit award for achieving good result in MSc level of studies
National	DU scholarship	1997	Bangladesh	Merit award for achieving good result in BSc level of studies

List of Publications

1. **Ahsan, S.**, Alam, N., & Sirajee, A.S. 2021. Determination of the efficacy of azithromycin on biofilm-forming uropathogenic *Escherichia coli* isolated from urinary tract infection samples. Dhaka University Journal of Biological Sciences, 30(1): 1-11. <https://doi.org/10.3329/dujbs.v30i1.51804>
2. Rini IJ, Islam MA and **Ahsan S.** 2020. Effect of Selected Antibiotics on Biofilm Formed by *Salmonella enterica* Serovars Typhi and Paratyphi. Bangladesh J Microbiol. 37(2): 62-65.
3. **Ahsan S** and Rahman S. 2019. Azithromycin Resistance in Clinical Isolates of *Salmonella enterica* Serovars Typhi and Paratyphi in Bangladesh. Micro. Drug Resis. **25**(1): 8-13.
4. **Ahsan S** and Islam R. 2019. Beta-Lactamase-Producing *Escherichia coli* In Bangladesh: Their Phenotypic and Molecular Characteristics. Dhaka Univ. J. Biol. Sci. **28**(1): 71-81.

5. **Ahsan S**, Bhowmik A, Goswami S and Uddin N. 2019. Detection of New Delhi Metallo Lactamase gene in Uropathogenic *E. coli*. Bangladesh J Microbiol. **36**(1): 29-33.
6. Bhowmik A and **Ahsan S**. 2019. Isolation and Enumeration of *Escherichia coli* from Soil and Water. Bangladesh J Microbiol. **36**(2): 75-77.
7. Ahmed S, Islam R and **Ahsan S**. 2019. Prevalence of Disease and Antibiotic Sensitivity Profile of Hospital Associated Pathogens: A study on a local diagnostic centre in Dhaka city. Bangladesh J Microbiol. **36**(2): 99-104.
8. **Ahsan S** and Summers D. 2018. Identification of a toxin coding fragment in pBSSB1, a linear plasmid from *Salmonella enterica* serovars Typhi that can stabilize a multicopy plasmid. Asian Pac J Trop Biomed. **8**(7): 365-370.
9. **Ahsan S**, Mahmud R, Ahsan K and Begum S. 2018. Isolation of Multidrug Resistant Bacteria from Aspirates of Cancer Patients. Bangladesh J Microbiol. **35**(1): 61-66.
10. Bhowmik A, Goswami S and **Ahsan S**. 2018. Microbiological Quality of Prawns Collected from Local Markets of Dhaka Metropolis. Bangladesh J Microbiol. **35**(1): 13-16.
11. Johura FT, Parveen R, Islam A, Sadique A, Rahim MN, Monira S, Khan AR, **Ahsan S**, Ohnishi M, Watanabe H, Chakraborty S, George CM, Cravioto A, Navarro A, Hasan B and Alam M (2017). Occurrence of Hybrid *Escherichia coli* Strains Carrying Shiga Toxin and Heat-Stable Toxin in Livestock of Bangladesh. Front. Public Health. **4**:287. doi: 10.3389/fpubh.2016.00287
12. Nayma J, Chowdhury FM, **Ahsan S** and Akhter MZ. (2017). Comparative Evaluation of Thermotolerant *Escherichia coli*, *Enterococci* and Total Coliform as Indicators of Water Quality. Bangladesh J Microbiol. **34**(1): 7-14
13. Islam T, Mamun AA, Sarker D, **Ahsan S** and Kabir MS. (2017). Effect of the combined use of Esomeprazole and Imipenem against *Pseudomonas aeruginosa*. Bangladesh J. Microbiol. **34**(1): 21-25.
14. Promite S, Saha SK, **Ahsan S** and Akhter MZ. (2017). Characterization and Antibiotic Sensitivity Profile of Bacteria Isolated from Patients with Respiratory Tract Infections in Bangladesh. Dhaka Univ. J. Pharm. Sci. **16**(2): 235-244.

15. **Ahsan S**, Uddin M, Mandal J and Akhter MZ. (2017). Resistance to Azithromycin and β -Lactam Antibiotics by Clinical Isolates of *E. coli* Isolated from Dhaka, Bangladesh. *Bangladesh J Microbiol.* **34**(2): 61-66.
16. **Ahsan S**, Amin R, and Bhowmik A. (2017). Genetic Relatedness among *Escherichia coli* Isolated from Clinical Samples. *Bangladesh J Microbiol.* **34**(2): 97-101.
17. Bhowmik A, **Ahsan S**, Akhtar MZ and Kabir MS. (2015). Incidence of β -lactamase producing *Escherichia coli* amongst clinical isolates in Dhaka, Bangladesh. *Stamford Journal of Microbiology.* **5**(1): 18-21
18. **Ahsan S**, Arefin MS, Munshi JL, Begum MN, Morium MM, Rahman S, Bhowmik A and Kabir MS. (2015). *In vitro* antibacterial activity of *Spirulina platensis* extracts against clinical isolates of *Salmonella enterica* serovars Typhi and Paratyphi (SUBP03). *Stamford J Microbiology.* **5**(1): 22-25
19. Morium, MM, **Ahsan, S.**, Kabir, MS, Akhter, MZ and Islam MF. (2014) (Published in 2015). *In vitro* biofilm formation ability of clinical isolates of *Salmonella enterica* serovars Typhi and Paratyphi. *Bangladesh J Microbiol.* 31(1&2): 35-39.
20. Mandal, J., Akhter, M. Z., M. S. Kabir, **Ahsan, S.** (2014). Development of a multiplex polymerase chain reaction protocol for the simultaneous detection of *Salmonella enterica* serovar Typhi and Class 1 integron. *Asian Pac. J. Trop. Dis.* 4(Suppl 2): S808-S812
21. Hossain, MD, **Ahsan, S**, Kabir, MS. (2014). Antibiotic resistance patterns of uropathogens isolated from catheterized and non-catheterized patients in Dhaka, Bangladesh. *Tzu Chi Med. J.* 26 127e131.
22. Kabir, MS, Hassan, M and **Ahsan, S.** (2013). Incidence of multiple potentially pathogenic bacteria in tap water from different restaurants in Dhaka city, Bangladesh. *Int. Food Res. J.* 21(1): 131-134.
23. Kabir, MS., Akter, A, Feroz, F, **Ahsan, S.** (2013). Determination of Antibiotic resistance pattern of Biofilm producing Pathogenic Bacteria associated with UTI. *Int. J. Drug Dev. & Res.* 5(4): 312-319.
24. Chowdhury, F. F. K., **Ahsan, S.** and Kabir, M. S. (2013). Antibiotic resistance patterns of pathogenic Gram negative bacteria isolated from UTI patients in Sirajganj district. *Stamford J. Microbiol.* 3(1): 17-20

25. Octavia S, Salim A, Kurniawan J, Lam C, Leung Q, **Ahsan S**, Reeves PR, Nair GB, Lan R. (2013). Population Structure and Evolution of Non-O1/Non-O139 *Vibrio cholerae* by Multilocus Sequence Typing. *PLoS One*. Jun 11;8(6):e65342. doi: 10.1371/journal.
26. **Ahsan, S.** and Kabir, M.S. (2012). Linear plasmids and their replication. *Stamford J. Microbiol.* 2(1): 1-5
27. **Ahsan, S.** (2012). Replication and stability of the linear plasmid pBSSB2. https://www.dspace.cam.ac.uk/bitstream/1810/241719/1/Sunjukta_Ahsans_thesis_06012012.pdf
28. Islam, M.S. and **Ahsan, S.** (2008). Role of L-Glutamate in the Tolerance of Osmotic Stress by *Escherichia coli*. *Bangladesh J Microbiol.* 25(1): 79-81.
29. Alam M, Sadique A, Hasan NA, Bhuiyan NA, Nair GB, Siddique AK, Sack DA, **Ahsan, S.**, Huq A, Sack RB, and Colwell RR. (2006). Effect of Transport at Ambient Temperature on Detection and Isolation of *Vibrio cholerae* from Environmental Samples. *Appl. Environ. Microbiol.* 72(3): 2185-2190
30. Alam, M., Hasan, N. A., **Ahsan, S.**, Pazhani, G. P., Tamura, K., Ramamurthy, T., Gomes, D. J., Rahman, S. R., Islam, A., Akhtar, F., Shinoda, S., Watanabe, H., Faruque, S. M. and Nair, G. B. (2006). Phenotypic and Molecular Characterization of *E. coli* Isolated from Aquatic Environment of Bangladesh. *Microbiol. Immunol.* 50(5): 359-370
31. Rahman M, **Ahsan S.**, Kabir MS, E. Karim and N. Choudhury. (2006). Microbiological Status and Hygienic Condition of Different Categories of Food Establishments in Dhaka, Bangladesh. *Dhaka Univ. J. Bio. Sci.* 15(1): 85-87
32. Abdullah Al Mamun and **Ahsan, S.** (2005). Bacteriological Quality of Some Commercially Available Bottled Water in Dhaka City. *Bangladesh J. Microbiol.* 22(2): 176-177
33. Islam MS, **Ahsan, S.**, Khan, S.I., Ahmed QS, Rashid MH, Islam KM, Sack RB. (2004). Virulence properties of Smooth and Rough strains of *Vibrio cholerae* O1. *Microbiol Immunol.* 48(4): 229-35.

34. Rahman, M.Z., **Ahsan, S.**, Islam, M.S. and Khan, S.I. (2004). Isolation of *ctx* containing *Vibrio mimicus* from the aquatic environment of Bangladesh. **13** (2): 121-128
35. Rahman, M., **S. Ahsan**, M.S. Kabir, E. Karim and N. Choudhury. (2004). Bacteriological Quality of Food and Beverages Served by Different Food Vendors in Dhaka City. *Bangladesh J. Microbiol.* **21**(2): 90-92
36. Hossain, MA, M. Alam, **S. Ahsan** and SI Khan. (2002). Viability of *Shigella dysenteriae* Type 1 on various inanimate objects. *Bangladesh J. Microbiol.* **19** (1&2): 79-82.

Academic activities

Co-ordinator, First Year BS Honours, 2019-2020

Co-ordinator, First Year BS Honours, 2016-2017

Student Adviser, 2016-2018

Membership

Bangladesh Society of Microbiologists

GNOBB

Research projects obtained					
Serial no.	Title of the project	Financed by	Year received	Grant	Report Submitted
1.	Understanding the molecular epidemiology of the typhoid bacteria in Bangladesh	Ministry of Science and Technology, Bangladesh	2012	7 lakhs	Yes
2.	Effect of proton pump inhibitors on biofilm formation and antimicrobial resistance of bacteria	University Grants Commission	2012	1lakh 20 thou	Yes
3.	Transfer and stability of multi-drug resistance between <i>Salmonella enterica</i> serovar Typhi and <i>Escherichia coli in vitro</i>	Centre for Advanced Research and Studies in Biological Sciences	2014	40 thou	Yes
4.	Determination of optimum conditions for the survival of selected bacterial pathogens in biofilms	Ministry of Education	2015	28 lakhs	Yes
5.	Stability of β -lactam antibiotic resistance and specific mediators in clinical isolate(s) of <i>Salmonella enterica</i> serovar Typhi <i>in vitro</i>	Centre for Advanced Research and Studies in Biological Sciences	2015	40 thou	Yes
6.	Tracking the source of <i>Escherichia coli</i> , the microbiological indicator of fecal pollution, in food and water, to assess associated health risks	Ministry of Science and Technology, Bangladesh	2015	18 lakh	Yes
7.	Non-Mutational Mediators of Macrolide Antibiotic Resistance in <i>Salmonella enterica</i> serovars Typhi and Paratyphi	University Grants Commission	2015	1 lakh 20 thou	Yes
8.	Prevalence and Characterization of Multi-drug Resistant Bacteria from Aspiration Cancer Patients in Dhaka, Bangladesh	Biotechnology Research Centre	2016	70 thou	Yes
9.	Molecular Typing of Bacteria Isolated from Cancer Aspirates	Centre for Advanced Research and Studies in Biological Sciences	2016	70 thou	Yes
10.	Phylogenetic analysis of drug resistant bacteria isolated from cancer aspirates	Ministry of Science and Technology, Bangladesh	2016	3 lakhs	Yes
11.	Effect of spice extract and antibiotic combinations on prevention of quorum sensing and inhibition of biofilm formation in <i>Salmonella</i> spp.	Biotechnology Research Centre	2017	40 thou	Yes
12.	Effect of antibiotics on prevention of quorum sensing and inhibition of biofilm formation in <i>Salmonella</i> spp.	Biotechnology Research Centre	2018	70 thou	Yes
13.	A research aid to One Health approach to circumvent <i>E. coli</i> infections in Bangladesh	University Grants Commission	2018	1 lakh	Yes
14.	Characterization of Microbiome in Different Types of Cancer	Ministry of Science and Technology, Bangladesh	2019	2.5 lacs	Yes
15.	Source Tracking of Fecal Pollution Indicator Bacteria in Street Foods of Dhaka	Centre for Advanced Research in Biological Sciences	2019	50 thou	Yes
16	Molecular identification of bacteria isolated from breast cancer tissues and surrounding healthy areas	Biotechnology Research Centre DU	2019	50 thou	Yes

Research projects obtained (contd.)					
17.	The rumen microbiome as a reservoir of antibiotic resistance: potential implications for human health	Dhaka University Mujib Centenary Research Grant	2021-2022	3 lakh 70 thou	No

Research student supervision

Serial no.	Thesis/ Project title	MPhil/ MSc/ BSc research project	Year conducted
1.	Investigation of the possible role of <i>Staphylococcus aureus</i> in breast cancer: opportunistic, pathogenic or causative?	MSc	2020
2.	Phylogenetic Analysis of Multidrug Resistant <i>E. coli</i>	MPhil	Completed
3.	Phylogenetics of <i>E. coli</i>	MSc	2018
4.	Effect of quorum sensing on azithromycin resistance by biofilm forming <i>E. coli</i>	MSc	2018
5.	Identification of a small plasmid carrying antibiotic resistance gene in <i>E. coli</i>	BSc project	2017
6.	Characterization of bacteria isolated from blood and aspirate fluids of cancer patients	MSc thesis	2017
7.	Genetic Relatedness among <i>Escherichia coli</i> Isolated from Clinical Sample	MSc project	2017
8.	Beta-Lactamase-Producing <i>Escherichia coli</i> in Bangladesh: their phenotypic and molecular characteristics	MSc thesis	2016
9.	Resistance to Azithromycin and β -Lactam Antibiotics by Clinical Isolates of <i>E. coli</i> isolated from Dhaka, Bangladesh	MSc thesis	2016
10.	Effect of Azithromycin, Imipenem, Ceftriaxone and Cefixime on biofilm formed by clinical isolates of <i>Salmonella enterica</i> serovars Typhi and Paratyphi	MSc thesis	2016
11.	Isolation of Multidrug Resistant Bacteria from Cancer Aspirates	MSc thesis	2016
12.	An investigation on beta lactam producing <i>E.coli</i> of clinical origin isolated from Dhaka, Bangladesh.	MSc thesis	2015
13.	Source tracking of <i>E. coli</i> of clinical and environmental origin isolated from Dhaka, Bangladesh	MSc thesis	2015
14.	Azithromycin and mediators in <i>Salmonella enterica</i> serovars Typhi and Paratyphi	MSc thesis	2015
15.	Increased antibiotic resistance of biofilm formed by clinical isolates of <i>Salmonella enterica</i> serovars Typhi and Paratyphi on abiotic surface	MSc thesis	2014



(Dr. Sunjukta Ahsan)