

**Curriculum Vitae of
Md. Hassan uz-Zaman**

Education

- **PhD in Cell and Molecular Biology**, University of Texas at Austin (2019-).
Supervisor: Professor Howard Ochman.
Research topic: De novo origin of genes in bacteria.
- **Master of Science**, Department of Microbiology, University of Dhaka.
Supervisor: Professor Mahmuda Yasmin.
Grade- 3.93/4.00
Passing year- 2016
Research topic: Genomics of Human papillomavirus Type-18 isolates in Bangladesh.
- **Bachelor of Science**, Department of Microbiology, University of Dhaka.
Grade- 3.83/4.00
Passing year- 2015

Work and Research Experience

- **Current-** Graduate research assistant, Institute of Cell and Molecular Biology, University of Texas at Austin (2019-)
- **International Center for Diarrhoeal Disease Research, Bangladesh (icddr,b)**
Designation(s)-
Senior Research Officer (February 2019 – July 2019)
Research Officer (March 2017 – January 2019)
Unit and Division- Environmental Microbiology Laboratory, Laboratory Science and Services Division

Summary of project responsibilities:

<u>Project title</u>	<u>Collaborating institute(s)</u>	<u>Responsibilities</u>
Aquaculture in Bangladesh and its impact on antimicrobial resistance	University of Birmingham, UK	Project planning and management, microbiological analysis of samples, manuscript writing
Towards a risk-based approach for improving drinking water security in Matlab, Bangladesh	Oxford University, UK	Project planning and management, development of survey tools and data analysis strategy, microbiological analysis of samples, manuscript writing
Multiple Indicator Cluster Survey (MICS) 2018-2019, Bangladesh	Bangladesh Bureau of Statistics & UNICEF Bangladesh	Project planning and management, Development of survey tools and data analysis strategy, training field data collectors
Pathways of bacterial contamination of groundwater sources from pit latrine effluents	London School of Hygiene and Tropical Medicine, UK	Development of data analysis strategy

Linking key water-related drivers of public health challenges in Bangladesh: Implications for transboundary water allocation	University of Notre Dame, IN, USA	Project planning and data management
Non-project responsibilities	icddr,b	Grant proposal writing, management of laboratory supplies and finances

- **Department of Microbiology, University of Dhaka**

Designation- Research Assistant

Laboratory- Virology and Immunology Laboratory

Duration- August 2016 – February 2017.

Summary of project responsibilities:

<u>Project title</u>	<u>Responsibilities</u>
Investigating association between cervical cancer and <i>Chlamydia trachomatis</i> among Bangladeshi cervical cancer patients	Study design, molecular detection of <i>Chlamydia trachomatis</i> in cervical tissue samples, data analysis, manuscript writing
<i>In silico</i> investigation of the nuclear localization profile of <i>Chlamydia trachomatis</i> proteome	Study design, computational prediction of protein localization, data analysis, manuscript writing

- **Master's Thesis: Comprehensive genome analysis of Human Papillomavirus (HPV) Type-18 isolates in Bangladesh: Challenges and Prospects**

Institute/Program: Virology and Immunology Laboratory, Department of Microbiology, University of Dhaka

Research Supervisor: Professor Dr. Mahmuda Yasmin

Standardized tests

GRE:

Verbal Reasoning- 169 (99th percentile)

Quantitative Reasoning- 162 (80th percentile)

Analytic Writing Assessment- 5.5 (98th percentile)

TOEFL: 120 (Speaking- 30, Listening- 30, Reading- 30, Writing- 30)

IELTS: 9.00 (Speaking- 9.00, Listening- 9.00, Reading- 9.00, Writing- 8.00)

Publications

Research articles:

- McInnes, R. S., **Uz-Zaman, M. H.**, Alam, I. T., Ho, S. F. S., Moran, R. A., Clemens, J. D., ... & van Schaik, W. (2021). Metagenome-wide analysis of rural and urban surface waters and sediments in Bangladesh identifies human waste as a driver of antibiotic resistance. *Msystems*, 6(4), e00137-21.

- Islam, M. S., **Zaman, M. H.**, Islam, M. S., Ahmed, N., & Clemens, J. D. (2020). Environmental reservoirs of *Vibrio cholerae*. *Vaccine*, 38, A52-A62.
- Rahman, M. M., Penny, G., Mondal, M. S., **Zaman, M. H.**, Kryston, A., Salehin, M., ... & Müller, M. F. (2019). Salinization in large river deltas: Drivers, impacts and socio-hydrological feedbacks. *Water security*, 6, 100024.
- **Uz-Zaman, M.**, Rahman, A., & Yasmin, M. (2018). Epidemiology of hepatitis B virus infection in Bangladesh: prevalence among general population, risk groups and genotype distribution. *Genes*, 9(11), 541.
- Rahman, M. M., Ahmad, S., Mahmud, A. S., **Hassan-uz-Zaman, M.**, Nahian, M. A., Ahmed, A., ... & Streatfield, P. K. (2019). Health consequences of climate change in Bangladesh: An overview of the evidence, knowledge gaps and challenges. *Wiley Interdisciplinary Reviews: Climate Change*, 10(5), e601.

Books:

- এটাই সায়েন্স: বাংলাদেশের অজানা কিছু গবেষণার গল্প (*Science Time: Tales of Little-known Bangladeshi Research*). (2021) Addhayan Publications, Dhaka, Bangladesh.
- এটাই সায়েন্স: স্বপ্নপুরী হাই স্কুল (*Science Time: Utopia Biology School*). (2022) Addhayan Publications, Dhaka, Bangladesh.

Conference presentations

- Rahman, A., **uz-Zaman, M.H.**, Yasmin, M. (2017, December). *Chlamydia trachomatis* as a Cofactor of Cervical Cancer: An *in silico* Investigation of the Nuclear Localization Profile of the Pathogen Proteome. Poster presentation at the Square-ACI International Conference on Biotechnology in Health and Agriculture 2017. Nawab Ali Chowdhury Senate Building, University of Dhaka.
- Islam, M., Hope, R., **uz-Zaman, M.H.**, Fischer, A., Ananya, T., Alam, M. (2017, December). Microbiological Assessment of Water Quality in the Matlab Observatory: An Interim Report. Oral presentation delivered at the National Steering Committee Meeting of **REACH: Improving Water Security for the Poor**. ITN Centre, Bangladesh University of Engineering and Technology.
- **uz-Zaman, M.H.**, Sharmin, S., Parveen, R., Jamalunnessa, Ahsan, C., Yasmin, M. (2017, April). Sequencing and Phylogenetic Analysis of Human Papillomavirus Type-18 Isolates from Bangladesh. Oral presentation delivered at the 30th Annual Conference of **Bangladesh Society of Microbiologists**. Nawab Ali Chowdhury Senate Building, University of Dhaka.

Professional courses/training

- **Practical Approaches to Analyzing Biological Data with R** offered by the Center for Biomedical Research Support, University of Texas at Austin
- **Principles of Machine Learning for Bioinformatics** offered by the Center for Biomedical Research Support, University of Texas at Austin
- **Comparative Genomic and Computational Approaches to the Evolution of Complex Phenotypes** offered by the Center for Biomedical Research Support, University of Texas at Austin
- **Genome Variant Analysis** offered by the Center for Biomedical Research Support, University of Texas at Austin
- **Introduction to RNA-Seq** offered by the Center for Biomedical Research Support, University of Texas at Austin
- **Introduction to Core NGS Concepts and Tools** offered by the Center for Biomedical Research Support, University of Texas at Austin
- **Introduction to Biocomputing** offered by the Center for Biomedical Research Support, University of

Texas at Austin

- **Introduction to Python** offered by the Center for Biomedical Research Support, University of Texas at Austin
- **Analysis of metagenomics and deep sequencing data** offered by the Institute of Microbiology and Infection, University of Birmingham, UK.
- **Hands on training: Grant proposal writing course** offered by the Global Health Institute, North South University, Dhaka-1229.
- **Next generation sequencing data analysis of microbial genomes** offered by the Laboratory Sciences and Services Division, icddr,b, Dhaka-1212.
- **Research protocol development** offered by the Technical Training Unit, icddr,b, Dhaka-1212.
- **Introduction to systematic review and meta-analysis in health research** offered by the James P. Grant School of Public Health, BRAC University, Dhaka-1212.
- **Statistical Data Analysis for Biological Sciences** offered by the Institute of Statistical Research and Training (ISRT), University of Dhaka, Dhaka-1000.

Scientific Skills

- **Bioinformatics:** Analysis of next generation sequence data, RNAseq data analysis, proficiency in Python, R and UNIX command line.
- **Molecular biology techniques:** PCR, cloning and transformation, flow cytometry.
- **Scientific writing:** Development of conceptual notes, grant proposals, systematic and narrative review articles, scientific manuscripts, scientific writing aimed at both expert and popular audiences.

Awards and Honors

- [Highly Commended in 2021 Bio-Rad Science Writing Competition](#)
- Dean's Award, 2014-15, Faculty of Biological Science, University of Dhaka
- Outstanding Academic Performance Award in recognition of M.S. examination results, 2017. Department of Microbiology, University of Dhaka
- National Science and Technology (NST) Fellowship for M.S. Thesis 2015-16, Ministry of Science and Technology, Government of People's Republic of Bangladesh

Community engagement

- Science outreach on [YouTube](#) and [Facebook](#), specifically focusing on biology and Bangladeshi public health research
- Guest writer in [Bio-Rad Lab Crunches science blog](#)

Membership in scientific societies or forums

- Young Scientist Development Initiative (YSDI) program in icddr,b, under mentorship of Dr. Ramani Baddam, Senior International Research Fellow, Laboratory Science and Services Division, icddr,b (2018-2019).
- Dhaka University Microbiology Alumni Association (DUMAA), general member.

Past extracurricular activities:

- 1st place in Scientific Presentation Competition in Microbiology Fair-2014, arranged by Department of Microbiology, University of Dhaka
- 1st place in Poster Presentation Competition in Microbiology Fair-2014, Department of Microbiology,

University of Dhaka

- Participated in Microbiology Fair-2013, Department of Microbiology, University of Dhaka
- 1st place in English Olympiad in Education and Cultural Fair (2010) arranged by various educational institutes in Dhaka
- 1st place in English Extempore Speech Competition in Education and Cultural Fair (2010) arranged by various educational institutes in Dhaka
- Member of the Notre Dame College English Blue Debating Team
- Blood donor for Microbiology Blood Donation Club (MBDC)

References

Dr. Howard Ochman

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