Sabbir Rahman Shuvo

Address: 19/D Golapbag, Dhaka-1203, Bangladesh

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Education:

Ph.D.: 2012-2018, in the Department of Microbiology at the University of Manitoba, Canada. **"***Mitochondrial Voltage dependent anion-selective channel(VDAC): A global player in cells".* Supervisor Dr. Deborah Court (https://home.cc.umanitoba.ca/~dcourt/).

B. Sc. in Microbiology: 2008-2011, North South University, Dhaka, Bangladesh. B. Sc. Project: "*Xylanse production from Fusarium and partial characterization of the enzyme*."

Research Interests:

Antibiotic resistance, Bacterial fitness, Phage therapy, Bioremediation, Mitochondria

Work experiences:

- **Assistant Professor:** February 2018-Present, Department of Biochemistry and Microbiology, North South University, Bangladesh

Teaching Certification course:

- Certificate in Higher Education Teaching: 2015-2017; at the Centre for Advancement of Teaching & Learning at the University of Manitoba.

Professional training:

- **Internship**: 2012; Aristopharma Limited, Bangladesh, a leading pharmaceutical company in Bangladesh. The internship involved training in good manufacturing practices, HACCP (Hazard analysis and critical control points), microbial quality control, and product development.

Publications: Google Scholar link (https://scholar.google.ca/citations?user=RgWMw84AAAAJ&hl=en)

1. Ishrat Jabeen, Sohidul Islam, AKM Hassan, Zerin Tasnim, **S. R. Shuvo** (2023). A Brief Insight into Citrobacter species-A Growing Threat to Public Health. Frontiers in Antibiotics. Volume 2, Page 1276982
2. Ishrat Jabeen, S. M. Iqbal Mahamud, Sohidul Islam, Anika Bushra Lamisa, Afia Anjum, Sumaiya Hossain Oishy, **S. R. Shuvo** (2023). Genomic identification and characterization of prophages associated with *Citrobacter freundii* strains. Journal of Advanced Biotechnology and Experimental Therapeutics, Volume 6, Issue 3.648-658
3. Fatimah Az Zahra, Ishrat Jabeen, Mohammed Jafar Uddin, Nazmun Nahar, Sohidul Islam, **S. R. Shuvo** (2023). Genomic analysis to elucidate the antibiotic resistance

mechanism of extremely drug-resistant *Pseudomonas aeruginosa* strains isolated from Bangladesh. Bioresearch Communications, Volume 9, Issue 1: 1208-1214

4. Mohammed Jafar Uddin, Farhana Haque, Ishrat Jabeen, **S. R. Shuvo** (2022). Characterization and Whole genome sequencing of an extreme arsenic tolerant *Citrobacter freundii* SRS1 strain isolated from Savar area in Bangladesh. Can. J. Microbiol. https://doi.org/10.1139/cjm-2022-0149
5. Farhana Haque, Ishrat Jabeen, Chaman Ara Keya, **S. R. Shuvo** (2022) Whole-genome sequencing and comparative analysis of heavy metals tolerant *Bacillus anthracis* FHq strain isolated from tannery effluents in Bangladesh. AIMS Microbiology 2022, Volume 8, Issue 2: 227-239.
6. **S. R. Shuvo**, Anna Motnenko, Oleg V Krokhin, Victor Spicer, Deborah A. Court (2022). Proteomic Shifts Reflecting Oxidative Stress and Reduced Capacity for Protein Synthesis, and Alterations to Mitochondrial Membranes in *Neurospora crassa* Lacking VDAC. Microorganisms. 10(2), 198
7. **S. R. Shuvo**, Lilian M Wiens, Saravananaidu Subramaniam, Jason R Treberg, Deborah A. Court (2019). Increased reactive oxygen species production and maintenance of membrane potential in VDAC-less *Neurospora crassa* mitochondria. J. of Bioenr. and Biomembranes 51(5):341-354
8. D. A. Court, S. Khetoo, **S. R. Shuvo**, S. D. Reitmeier, G. Hausner (2017). *In silico* analysis of co-evolution among ERMES proteins, Pex11 and Lam6, Can. J. Microbiol 63(12):984-997
9. **S. R. Shuvo**, U. Kovaltchouk, A. Zubaer, A. Kumar, W.A.T. Summers, L.J. Donald, G. Hausner, D.A. Court, (2017). Functional characterization of an N-terminally truncated mitochondrial porin expressed in *Neurospora crassa*, Can. J. Microbiol. 63:730-738
10. **S. R. Shuvo**, F.G. Ferens, D.A. Court, (2016). The N-terminus of VDAC: Structure, Mutational Analysis, and a potential role in regulating barrel Shape, Biochim. Biophys. Acta – Biomembranes: 6:1350–1361
11. Y.W. Lao, M. Gungormusler-Yilmaz, **S. R. Shuvo**, T. Verbeke, V. Spicer, O.V. Krokhin, (2015). Chromatographic behavior of peptides containing oxidized methionine residues in proteomic LC-MS experiments: Complex tale of a simple modification, J. Proteomics. 125:131-9

Conference Presentations :

1. A. B. Lamisa, S. H. Oishy, S. M. I. Mahamud, **S. R. Shuvo** (2022). Prevalence and Evolutionary Analysis of Prophages Associated with *Citrobacter freundii* Genomes. 2nd ICGNB (Poster).
2. K M S. A. Shayer, Sadia Ferdous**, S. R. Shuvo**, Sohidul Islam (2022). Analyses of Mobile Genetic Elements (MGEs) in *Acinetobacter baumannii* clinical isolates. 2nd ICGNB (Poster).
3. M. J. Uddin, Farhana Haque, Ishrat Jabeen, **S. R. Shuvo** (2022). *Citrobacter freundii SRS1*: an extreme arsenic tolerance strain isolated from Savar, Bangladesh. 2nd ICGNB (Poster).

4. Farhana Haque, **S. R. Shuvo** (2020). Whole-genome sequencing of a lead-tolerant Bacillus anthracis strain isolated from Bangladesh. 34th annual conference of Bangladesh Society of Microbiologists. (Oral Presentation)
5. Farhana Haque, **S. R. Shuvo** (2020). Isolation and characterization of a lead-resistant bacterial strain from tannery effluent of Savar for bioremediation purposes. ICSL(Poster)
6. Md Jafar Uddin, Nayma Haque Tonny, **S. R. Shuvo** (2020). Isolation and characterization of a novel arsenic-resistant bacterial strain from Savar. ICSL(Poster)
7. M. Z. U. Ahmed, A. S. Sadi, **S. R. Shuvo**, N. Bulbul, (2019). *In-silico* Characterization of Hypothetical Proteins from *Neisseria meningitidis* serogroup B strain MC58. ICNST (Poster).

Grants:

1. Conference Travel and Research Grants, North South University, Bangladesh, 2021-2024

Project title: Characterization of multidrug-resistant *Stenotrophomonas maltophilia* and their bacteriophage by whole genome sequencing

2. Conference Travel and Research Grants, North South University, Bangladesh, 2021-2023

Project title: Feasting on carbon source: Transcriptomic profiling of cephradine resistance and ESBL producing *E. coli* strains grown in maltose as a carbon source

3. Conference Travel and Research Grants, North South University, Bangladesh, 2021-2022

Project title: *Deciphering the enigma of vancomycin and methicillin resistance mechanisms of Staphylococcus aureus isolated from Bangladesh by whole-genome sequencing*

4. R & D grant from Ministry of Science and Technology, Bangladesh, 2019-2020.

Project title: *Whole-genome sequencing and characterization of arsenic-resistant bacterial strains*

5. Conference Travel and Research Grants, North South University, Bangladesh, 2020-2021

Project title: *A tale of preventing biofilm formation of multi-drug resistant E. coli by the mixture of bacteriophages*.

6. Conference Travel and Research Grants, North South University, Bangladesh, 2019-2020

Project title: *Killing the superbug: using bacteriophage cocktail to kill bacteria on the surfaces of the hospitals to reduce infections*.

7. R & D grant from Ministry of Science and Technology, Bangladesh, 2019-2020.

Project title: *Whole-genome sequencing and characterization of arsenic-resistant bacterial strains*

8. R & D grant from Ministry of Science and Technology, Bangladesh, 2018-2019.

Project title: *Removal of arsenic from farmland soil by genetically modified microorganisms and increase rice production*

References:

References will be provided upon request.