Curriculum Vitae, of
Munawar Sultana, PhD,
Professor
Department of Microbiology, University of Dhaka,
Dhaka 1000, Bangladesh
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a. Professional Preparation

University of Dhaka	Microbiology	B.S (Honrs), 2001, 1st class 1st (A+ grade)
University of Dhaka	Microbiology	M.S., 2003, 1st class 2nd (A+ grade)
University of Freiberg, Germany	Biology	Ph.D, 2010, Magna cum laude (Very good grade)
University of California, Santa Cruz, USA	Microbiology and Environmental Toxicology	Fulbright visiting researcher (Sept, 2014 to Jan, 2015)

b. Appointments

1. Professor, Department of Microbiology, University of Dhaka, 1st December, 2022 till to date
2. Associate Professor, Department of Microbiology, University of Dhaka, 21th July, 2016 to 30th November, 2022.
3. Assistant Professor, Department of Microbiology, University of Dhaka, 1st March, 2012 to 20th July 2016.
4. Assistant Professor, Department of Microbiology, Jahangirnagar University, Savar, Dhaka November, 2011 to February, 2012.
5. Lecturer, Department of Microbiology, Jahangirnagar University, Savar, Dhaka from January, 2011 to November, 2011.
6. Assistant Professor, Department of Microbiology, Primeasia University (Bangladesh) from June 03, 2010 to January 15, 2011.
7. Lecturer, Department of Microbiology, Primeasia University (Bangladesh) from October 1, 2005 to March 30, 2006.

c. Synergistic Activities

Academic and Research Awards:

- **Dean's Research Award**, Faculty of Biological Sciences, University of Dhaka, Category: Associate Professor, Period: 2018-19 and 2019-20
- Best **innovation idea award (Product category), First Prize** in Innovation Fair, University of Dhaka, 4th March, 2024
- **Young Scientist 2012 award by BAS-TWAS (The World Academy of Science)**
- OWSD (Organization for women in Science) **early career research fellowship** 2018.
- Samson H Chowdhury Award for **Young Scientist 2014**
- **Fulbright Visiting fellowship 2014-15** as visiting Researcher at the University of California, Santa Cruz, USA
- **Prime Minister Gold Medal Award** for outstanding academic performance for being the top student in the faculty of biological science.

- **Dean's Gold Medal Award** for excellent academic result at B.Sc in the faculty of biological science, University of Dhaka.
- **Government Talent pool Scholarship obtaining** the third position in the University ranking for excellent academic result at B.Sc.
- **"Sumitomo Corporation, Japan" scholarship** for outstanding academic performance in the faculty of biological science, University of Dhaka. [selected for the scholarship for 4 times i.e. each year of my four year B.Sc. study based on result]
- **General Grade Scholarship** provided by Board of Intermediate and Secondary Education, Dhaka for the performance the in H.S.C. examination
- **NUFU (Norway) research fellowship** for M.S. research.
- **DAAD (German academic exchange service) scholarship** for Ph.D in Germany.
- **JSPH HOPE fellow 2013** to attend a meeting with Nobel Laureates at Tokyo, Japan

Manuscript Editor/Reviewer: Currently

- Guest Editor (2023-24) of **BMC Medical Genomics** (Springer Nature) special collection issue of 'Microbiomes in human disease'
- Guest Editor (**Frontiers in Public Health**) 2018

Consistent reviewer for the journals:

- **Journal of Biotechnology** (publisher Elsevier),
- **Infection, Genetics and Evolution** (publisher Elsevier),
- **Science of the Total Environment** (publisher Elsevier),
- **Environmental Science and Pollution Research** (publisher Springer),
- **Waste and Biomass Valorization** (publisher Springer),
- **Frontiers in Environmental Science** (Open access academic publisher)**,**
- **Frontiers in public health** (Open access academic publisher)**,**
- **African Journal of Microbiology** (Open access academic publisher) **etc.**

Membership:

Life Member, Bangladesh Society of Microbiologists (BSM)
Joint Secretary, Bangladesh Society of Microbiologists (BSM), 2021-22, 22-23, 23-24
Executive member, Biosafety and Biosecurity in Bangladesh (BBB),
Outreach Member, American Society of Microbiology (ASM),
Member, Graduate Microbiologist Association, Bangladesh;
DAAD alumni
Member, German Microbiologists association,
Fulbright alumni,
Registered graduate of University of Dhaka (Life member)

d. Collaborators & Other Affiliations

(i) Collaborators

1. Professor Nils Kare Birkeland, University of Bergen, Norway (collaboration for M.S. project).
2. Anne-Christine Schmidt, TU Bergakademie Freiberg (collaboration for PhD work)
3. Professor R.M.Wilfred, Free University Amsterdam (Co PhD supervisor)
4. Dr. Britta Planer Freiderich, Byreut University, Germany (collaboration for PhD work)
5. Assistant Professor Dr. Sohel Ahmed, Department of Biochemistry and molecular Biology, Jahangirnagar University, Bangladesh (Project collaborator)

(ii) Graduate and Postdoctoral Advisors

Professor Chad Saltikov, University of California, Santa Cruz, CA, USA (Associate faculty during visiting research fellowship)
Professor Michael Schlömann, TU Freiberg, Germany, (PhD supervisor)
Professor Nils Kare Birkeland, University of Bergen, Norway (M.S. co supervisor)
Professor S.I. Khan, University of Dhaka (M.S. supervisor)
Professor S.I. Khan, University of Dhaka (B.Sc. supervisor)

(iii) Thesis Advisor and Postgraduate Sponsor

Total M.S. student supervised/co-supervised 22; Current M.S. thesis student number 3
Total PhD student supervised 4 as main supervisor, 5 as co-supervisor, Current PhD student 2;
Organization of the current M.S. and PhD students: Department of Microbiology, University of Dhaka; Department of Molecular Cell Physiology, FALW, VU University Amsterdam, Department of Microbiology, Jahangir Nagar University, Savar, Dhaka

e. Research projects and collaboration (selected)

Title of the Project	**Amount awarded**	**Date of Award**	**Funding agency**	**Role of the applicant on the grant**
Development of recombinant peptide vaccine and diagnostic tool for Foot-and-Mouth Disease Virus	14,90,000 BDT	2022-23	Ministry of Education, Bangladesh	Project PI
Complete genome characterization of arsenite oxidizing isolates and determination of their electrochemical Arsenic conversion	3,00,000 BDT	2021-2022	UGC, life science project, Bangladesh	Project PI
Effect of Environmental pollution and seasonal change on microbial diversity of Buriganga river water in Bangladesh with an emphasis on metal and antibiotic resistant bacteria	7,85,000 BDT	2022-23	UGC, Bangladesh funded project granted by the University of Dhaka	Project PI
Development of bacteriophage and its protein based portable electrochemical biosensor for screening of Salmonella bacterium from environmental samples	35,000 USD	23.1.2023-22.1.2025	TWAS, UNESCO	Project PI
Genomic Expression Assay of Arsenite Transformation Associated to Antibiotic Co-selection Within Indigenous Arsenite Oxidizing Isolates.	2,50,000 BDT	1.7.2022-30.6.2023	Chromosome Research Center, University of Dhaka	Project PI
Development of Enzyme-Linked Immunosorbent Assay (ELISA) kit for detection of serotype specific Foot-and-Mouth Disease virus (FMDV) infection from Cattle	6,66,000 BDT	1.7.2021-30.6.2022	Centennial Research Fund, University of Dhaka	Project PI
Bioaccumulation, Detoxification and Electrochemical detection of Arsenic	2,50,000 BDT	1.7.2021-30.6.2022	Ministry of Science and Technology	Project PI

Using Potential Indigenous Arsenotrophic Bacteriome from Bangladesh				
Co-expression Analysis of Arsenic and Antibiotic Resistance Genes in Microbial Community Using Real-Time qRT-PCR	3,00,000 BDT	1.7.2020-30.6.2021	Ministry of Science and Technology, Bangladesh	Project PI
Assessment of VP2 capsid protein of FMDV as a potential candidate for diagnostic kit development using recombinant protein technology.	3,00,000	1.10.2020-30.9.2021	University Grants Commission (UGC), Bangladesh	Project PI
Diversity and functional gene analysis of arsenotrophic bacteria in Bangladesh Environments	300,000 BDT	14.7.2019-30.06-2020	University Grants Commission (UGC), Bangladesh	Project PI
Development of an easy to-use economic diagnostic kit for foot-and-mouth disease virus	50,000 USD	1.1.2019-30.6.2021	OWSD (Organization for women in Science in developing world), UNESCO	Project PI
In Vitro Analysis of Destabilizing Influence of Antibiotics on Inorganic Arsenic (As) Transformations Mediated by Aquatic Microbial Communities	400,000 BDT	1.7.2017-30.6.2018	Ministry of Science and Technology, Bangladesh	Project PI
Bacterial poultry diseases in Bangladesh: Implementation of cost effective pathogen detection method and a strategic management program'	35,00,000 BDT	1.4.2017-30.3.2020	BAS-USDA	Project Co-PI
Effect of Antibiotic Pollution on Arsenotrophic microbiome and Arsenic redox transformation in Aquifers	350,000 BDT	1.7.2016-30.6.2017	University Grants Commission (UGC), Bangladesh	
Clinical wastewater in Bangladesh: it's impact on pollution of ecological water bodies with resistant bacteria and active antibiotics	18000 USD	10.10.2015-9.9.2017	The World Academy of Science (TWAS)	Project PI
Arsenic Transforming Gene Analysis and Bioremediation Potential of Arsenic Metabolizing Bacteria Retrieved from Bangladesh Environments	5,00,000 BDT	1.7.2015-30.6.2016	Ministry of Science and Technology, Bangladesh, Bangladesh	Project PI
Development of Vaccine and Effective Diagnostic Kits for Foot-and-Mouth Disease Virus in Bangladesh.	7,65,00,000 BDT	1.7.2015-30.7.2018	UGC and World Bank, Window-4 IndustryAcademia Innovation Fund (CP384P)	Project Co-PI
Isolation and Detection of ESBL Producing Enterobateriaceae from Hospital Effluents	8,00,000 BDT	1.7.2013-30.6.2014	University Grants Commission (UGC), Bangladesh	Project PI

Transformation of Arsenic compounds by bacteria from aquifers and soils of Bangladesh	1,00,000	1.7.2013-30.6.2014	Center for Advanced Studies and Research in Biological Sciences	Project PI
Antibiotics and resistant bacteria pollutions: its impact on the environmental microbial communities and development of resistance gene pools	6,00,000	1.7.2012-30.6.2013	Ministry of Science and Technology, Bangladesh, Bangladesh	Project PI
Prevalence and characterization of *qnr* gene in extended spectrum β-lactamase producing enterobacterial isolates in Bangladesh	3,00,000	1.7.2011-306.2012	Ministry of Science and Technology, Bangladesh, Bangladesh	Project PI
Isolation and detection of ESBL producing *Enterobacteriaceae* from hospital effluents	1,00,000	1.7.2011-30.6.2012	UGC (University Grant Commission)	Project PI
'Isolation and characterization of arsenic resistant bacteria from Nuclear reactor surrounding areas in Savar, Bangladesh'	1,00,000	1.7.2010-30.6.2011	UGC, Bangladesh	Project PI
Exploring the microbiological processes of arsenic (re)mobilization and potential remediation of arsenic in SAR technology		2010-2015	NWO-WOTRO, Collaboration with the Netherlands and Bangladesh	Project collaborator.

f. Language proficiency:

1. Bengali: Mother language.
2. English: Reading, writing, speaking, understanding (very good)
3. German: Reading, writing, speaking, understanding (good)
4. Hindi: Reading, speaking, understanding (good)

List of Publications: Sultana, Munawar

Citation indices (https://scholar.google.com)

Citations	2242
h-index	24
i10-index	53

Patents

Two Patent applications on 'Bacteriophage based biosensor' and 'FMDV diagnostic kit' is under processing in Bangladesh

A. Journal publication:

2024

Haque, F., Diba, F., Istiaq, A. Siddique, MA., Mou, TJ., Hossain MA., and **Sultana M.,** Novel insights into the co-selection of metal-driven antibiotic resistance in bacteria: a study of arsenic and

antibiotic co-exposure. *Arch Microbiol* **206**, 194 (2024). https://doi.org/10.1007/s00203-024-03873-0

Anjume, H., Hossain KA., Hossain A., Hossain MA., **Sultana, M.** (2024) 'Complete genome characterization of foot-and-mouth disease virus My-466 belonging to the novel lineage O/ME-SA/SA-2018'. Helion: 10 (5) https://doi.org/10.1016/j.heliyon.2024.e26716

S Ghosh, H Anjume, MA Hossain, **M Sultana,** SR Alim. 'Prevalence of gram-positive bacteria in hospital cafeteria fast foods in dhaka, bangladesh and their resistance to current antibacterial agents'. Bioresearch Communications-(BRC): 10(1): 1361-1370.

2023

Diba, F., Hoque, M.N., Rahman, M.S., Haque, F., Rahman KMJ., Moniruzzaman, M., Khan M., Hossain MA., **Sultana, M.** Metagenomic and culture-dependent approaches unveil active microbial community and novel functional genes involved in arsenic mobilization and detoxification in groundwater. BMC Microbiol 23, 241 (2023). https://doi.org/10.1186/s12866-023-02980-0

Hossain, K.A., Anjume, H., Akhter, M., Alam, K.M.M., Yeamin A. Akter S., Islam, MR., **Sultana M.,** Hossain MA. Epidemiological Surveillance and Mutational Pattern Analysis of Foot-and-Mouth Disease Outbreaks in Bangladesh during 2012–2021, *Transboundary and Emerging Diseases*, vol. 2023, Article ID 8896572, 18 pages, 2023. https://doi.org/10.1155/2023/8896572

Hossain, K.A., Anjume, H., Alam, K.M.M., Yeamin A. Akter S., Hossain MA., **Sultana M**. Emergence of a novel sublineage, MYMBD21 under SA-2018 lineage of Foot-and-Mouth Disease Virus serotype O in Bangladesh. Sci Rep 13, 9817 (2023). https://doi.org/10.1038/s41598-023-36830-w

Islam, OK., Islam, I., Saha, O., Rahaman, MM., **Sultana, M.,** Bockmühl, DP., Hossain, MA. Genomic variability correlates with biofilm phenotypes in multidrug resistant clinical isolates of *Pseudomonas aeruginosa*. Scientific Report. Volume 13 (1) 7867

Saha, O., Basri, R., Hossain MA., **Sultana, M**. Characterization of multidrug and heavy metal resistance of carbapenemases producing *Klebsiella pneumoniae* from poultry samples in Bangladesh. Vet Med Sci. 2023; 9:1685–1701. DOI: 10.1002/vms3.1168.

2022

M. Nazmul Hoque, M. Ishrat Jahan, M. Anwar Hossain **Munawar Sultana.,** Genomic diversity and molecular epidemiology of a multidrug-resistant *Pseudomonas aeruginosa* DMC30b isolated from a hospitalized burn patient in Bangladesh. Journal of Global Antimicrobial Resistance Volume 31, December 2022, Pages 110-118

Hasan, M.M.; Hoque, M.N.; Ahmed, F.; Haque, M.I.-M.; **Sultana, M.**; Hossain, M.A. Circulating Phylotypes of White Spot Syndrome Virus in Bangladesh and Their Virulence. Microorganisms 2022, 10, 191. https://doi.org/10.3390/ microorganisms10010191

M. Nazmul Hoque, M. Shaminur Rahman , Tofazzal Islam , **Munawar Sultana** , Keith A. Crandall, M. Anwar Hossain. Induction of mastitis by cow-to-mouse fecal and milk microbiota transplantation causes microbiome dysbiosis and genomic functional perturbation in mice. Animal Microbiome, (2022)4:43.

M. Nazmul Hoque, Anup Kumar Talukder, Otun Saha, Mehedi Mahmudul Hasan, **Munawar Sultana,** ANM Aminoor Rahman, Ziban Chandra Das., Antibiogram and virulence profiling reveals multidrug resistant *Staphylococcus aureus* as the predominant aetiology of subclinical mastitis in riverine buffaloes. Vet Med Sci. 2022; 1–15. https://doi.org/10.1002/vms3.942

Khondaker Md Jaminur Rahman, Farzana Diba, Md Sadikur Rahman Shuvo, Mohammad Anwar Siddique, M Anwar Hossain, **Munawar Sultana**. Metagenomic investigation of bacterial community of arsenic-prone area in the northwest region of Bangladesh. Bangladesh J Microbiol, Volume 39, Number 1, June 2022, pp 31-38

2021

Farzana Diba, Md. Zaved Hossain Khan, Salman Zahir Uddin, Arif Istiaq, Md. Sadikur Rahman Shuvo, A. S. M. Rubayet UlAlam, M. Anwar Hossain and **Munawar Sultana**. (2021). Bioaccumulation and detoxifcation of trivalent arsenic by *Achromobacter xylosoxidans* BHW-15 and electrochemical detection of its transformation efciency. Scientifc Reports 11:21312 | https://doi.org/10.1038/s41598-021-00745-1

M. Shaminur Rahman, M. Nazmul Hoque, Joynob Akter Puspo, M. Raful Islam, Niloy Das, Mohammad Anwar Siddique , M.Anwar Hossain and **Munawar Sultana**. (2021) . Microbiome signature and diversity regulates the level of energy production under anaerobic condition. Scientifc Reports (2021) 11:19777

M. Ishrat Jahan, Md. Mizanur Rahaman, M. Anwar Hossain and **Munawar Sultana** (2021). Draft Genome Sequence of Carbapenem-Resistant Clinical Acinetobacter baumannii Revealing Co-existence of Four Classes of ß-lactamases (accepted for publication in Journal of Global Antimicrobial Resistance)

Khandokar Fahmida Sultana, Otun Saha, M. Nazmul Hoque, **Munawar Sultana**, M. Anwar Hossain (2021). Multilocus sequence typing of multidrug-resistant *Salmonella* strains circulating in poultry farms of Bangladesh. Brazilian Journal of Microbiology https://doi.org/10.1007/s42770-021-00577-1

Saha O, Islam MR, Rahman MS, Hoque MN, Hossain MA, **Sultana M** (2021) First report from Bangladesh on genetic diversity of multidrug-resistant *Pasteurella multocida* type B:2 in fowl cholera, Veterinary World, 14(9): 2527-2542.

Siam Md.HB, Imran A, Limon Md.BH, Zahid MH, Hossain Md.A, Siddique MA, **Sultana M,** Hossain MA. (2021) Antibiotic Abuse: A Cross-Sectional Study on Knowledge, Attitude, and Behavior Among the University Students in Dhaka, Bangladesh. *Electron J Gen Med*. 2021;18(1):emXXX. https://doi.org/10.29333/ejgm/xxxx (IF: 2.222)

Hoque, MN., Akter, S., Mishu, ID., Islam, MR., Rahman, MS., Akhter, M., Islam, I., Hasan, MM., Rahman, MM., **Sultana, M**., Islam, T., Hossain, MA. (2021) Microbial co-infections in COVID-19: associated microbiota and underlying mechanisms of pathogenesis. *Microbial Pathogenesis* 156 (2021) 104941 **IF**: 2.94)

Hoque, MN., **Sultana, M**., Hossain, MA (2021) Dynamic changes in microbiome composition and genomic functional potentials in bovine mastitis. *J. Data Mining Genomics Proteomics*.12(1): 232 (Mini Review)

Saha, O., Rakhi, N. N., Hoque, M. N., **Sultana, M**., Hossain, MA. (2021). Genome-wide Genetic Marker Analysis and Genotyping of *Escherichia fergusonii* strain OTSVEF–60. *Brazilian J. Microbiol*.doi.org/10.1007/s42770-021-00441-2 (**IF**: 2.719)

Mohammad Shaminur Rahman, Mohammad Rafiul Islam, Mohammad Nazmul Hoque, Abu Sayed Mohammad Rubayet Ul Alam, Masuda Akther, Joynob Akter Puspo, Salma Akter, Azraf Anwar, Munawar Sultana, Mohammad Anwar Hossain. Comprehensive annotations of the mutational spectra of SARS-CoV-2 spike protein: a fast and accurate pipeline, 68 (3): 1625-1638

Rahman, MS., M. Islam, MR., Alam, ASMRU., Islam, I., Hoque, MN., Akter, S., Rahaman, MM., **Sultana, M**., Hossain, MA (2020) Evolutionary dynamics of SARS-CoV-2 nucleocapsid protein and its consequences. *J. Med. Virol.* 93 (4) 2177-2195. DOI:10.1002/jmv.26626. (IF: 2.021)

Islam, M. Rafiul, M. Shaminur Rahman, Md Al Amin, ASM Rubayet Ul Alam, Mohammad Anwar Siddique, **Munawar Sultana**, and M. Anwar Hossain. "Evidence of combined effect of amino acid substitutions within G-H and B-C loops of VP1 conferring serological heterogeneity in foot-and-mouth disease virus serotype A." Transboundary and Emerging Diseases. 68(2): 375-384 (2021).

M Shaminur Rahman, M Nazmul Hoque, M Rafiul Islam, Israt Islam, Israt Dilruba Mishu, Md Mizanur Rahaman, Munawar Sultana, M Anwar Hossain. Mutational insights into the envelope protein of SARS-CoV-2. Gene Reports 22, 100997.

2020

Saha, O., Hoque, MN., Islam, OK., Rahman, MM., **Sultana, M**., Hossain, MA (2020) Multidrug-Resistant Avian Pathogenic *Escherichia coli* Strains and Association of Their Virulence Genes in Bangladesh. *Microorganisms*. 8, 1135; doi:10.3390/microorganisms8081135. (IF: 4.152)

Islam, MR., Hoque, MN., Rahman, SM., Puspo , JA., Akhter , M., Akter, S., Alam, ASMRU, , **Sultana, M**., Crandall, KA., Hossain, MA. (2020) Genome Wide Analysis of Severe Acute Respiratory Syndrome Coronavirus-2 Implicates World-Wide Circulatory Virus Strains Heterogeneity. www.nature.com/articles/s41598-020-70812-6 (Scientific reports, Sci.rep.) (IF: 4.011)

M. Ishrat Jahan, M. Mizanur Rahaman, M. Anwar Hossain and **Munawar Sultana**. Occurrence of intI1-associated VIM-5 carbapenemase and co-existence of all four classes of beta-lactamase I carbapenem-resistant clinical *Pseudomonas aeruginosa* DMC-27b. J Antimicrob Chemother 2020; 75: 86–91

Israt Dilruba Mishu, Salma Akter, A. S. M. Rubayet Ul Alam, M. Anwar Hossain, **Munawar Sultana**. In Silico Evolutionary Divergence Analysis Suggests the Potentiality of Capsid Protein VP2 in Serotype Independent Foot-and-Mouth Disease Virus Detection. Frontiers in Veterinary Science. (2020) 7 (592)

Al Amin, Md, Md Rahmat Ali, ASM Rubayet Ul Alam, Mohammad Anwar Siddique, Md Mizanur Rahaman, **Munawar Sultana**, and Md Anwar Hossain. "Complete genome sequence of a potential foot-and-mouth disease virus serotype O vaccine strain from Bangladesh." Archives of Virology (2020) 165:2119–2122

Al Amin, Md, M. Rahmat Ali, M. Rafiul Islam, ASM Rubayet Ul Alam, Dipok Kumer Shill, M. Shaminur Rahman, Mohammad Anwar Siddique, **Munawar Sultana**, and M. Anwar Hossain. "Development and serology based efficacy assessment of a trivalent foot-and-mouth disease vaccine." Vaccine 38 (2020) 4970–4978.

Rahman MS, Hoque MN, Islam MR, Akter S, Rubayet Ul Alam ASM, Siddique MA, Saha O, Rahaman MM, **Sultana M**, Crandall KA, Hossain MA. 2020. Epitope-based chimeric peptide vaccine design against S, M and E proteins of SARS-CoV-2, the etiologic agent of COVID-19 pandemic: an in silico approach. PeerJ 8:e9572 http://doi.org/10.7717/peerj.9572

M. Rafiul Islam, M. Nazmul Hoque, M. Shaminur Rahman, A. S. M. Rubayet Ul Alam, Masuda Akther, J. Akter Puspo, Salma Akter, **Munawar Sultana**, Keith A. Crandall & M. Anwar Hossain Genome-wide analysis of SARS-CoV-2 virus strains circulating worldwide implicates heterogeneity. Sci Rep 10, 14004 (2020).

Hoque MN, Istiaq A, Clement RA, Gibson KM, Saha O, Islam OK, Abir RA, **Sultana M,** Siddiki AZ, Crandall KA and Hossain MA (2020) Insights Into the Resistome of Bovine Clinical Mastitis Microbiome, a Key Factor in Disease Complication. Front. Microbiol. 11:860 doi: 10.3389/fmicb.2020.00860

M Nazmul Hoque, Arif Istiaq, M Shaminur Rahman, M Rafiul Islam, Azraf Anwar, AMAM Zonaed Siddiki, Munawar Sultana, Keith A Crandall, M Anwar Hossain. Microbiome dynamics and genomic determinants of bovine mastitis. Genomics 112 (6): 5188-5203

Saha, Otun, M. Nazmul Hoque, Ovinu Kibria Islam, Md Rahaman, **Munawar Sultana**, and M. Anwar Hossain. "Multidrug-Resistant Avian Pathogenic Escherichia coli Strains and Association of Their Virulence Genes in Bangladesh." Microorganisms 8, no. 8 (2020): 1135.

Md Inja-Mamun Haque, ASM Rubayet Ul Alam, Nafia Akter, Mohammad Anwar Siddique, **Munawar Sultana**, M Anwar Hossain, Mahmud Hasan. Molecular characterization of 'tubifex worms' based on 16S rRNA and cytochrome c oxidase subunit I. Aquaculture Reports (16). https://doi.org/10.1016/j.aqrep.2020.100292

M Rahmat Ali, ASM Rubayet Ul Alam, Md Al Amin, Mohammad Anwar Siddique, **Munawar Sultana**, M Anwar Hossain. Emergence of novel lineage of foot-and-mouth disease virus serotype Asia1 BD-18 (G-IX) in Bangladesh. Transboundary and Emerging Diseases (2020): 67: 486-493

Md Asadulghani, Pawan Angra, Md Giasuddin, Md Latiful Bari, Md Shahidul Islam, Chandan Kumar Roy, Md Rakibul Islam, Zhahirul Islam, Kazi Nadim Hasan, Mohammad Aminul Islam, A.H.M. Nurun Nabi, Tasnim Farzana, Jamal Pasha Chowdhury, **Munawar Sultana**, Tania Mannan, Mohammad Hafizur Rahman, Abdul Jabbar Sikder, and Md Salimullah. Strengthening Biosafety and Biosecurity Status in Bangladesh: A Sustainable Approach. Applied Biosafety (June 2020) P:1-13

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spp. of Poultry Origin. Veterinary medicine international. Volume 2020, Article ID 8811540, 10 pages. https://doi.org/10.1155/2020/8811540

2019

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Rakhi NN., Alam, A. S. M. R. U.' **Sultana M.,** Rahaman MM., Hossain, M. A. Diversity of carbapenemases in clinical isolates: The emergence of *bla*$_{VIM-5}$ in Bangladesh. *Journal of infection and chemotheraphy*. June 2019 Volume 25, Issue 6, Pages 444–451

Istiaq A1, Shuvo MSR, Rahman KMJ, Siddique MA, Hossain MA, **Sultana M**. Adaptation of metal and antibiotic resistant traits in novel β-Proteobacterium *Achromobacter xylosoxidans* BHW-15. *PeerJ*. 2019 Mar 13;7:e6537. doi: 10.7717/peerj.6537. eCollection 2019

Hasan S, **Sultana M,** Hossain MA. Complete Genome Arrangement Revealed the Emergence of a Poultry Origin Superbug *Citrobacter portucalensis* Strain NR-12. *J Glob Antimicrob Resist.* 2019 18 (126-129)

M Al Amin, M Rahmat Ali, ASM Rubayet Ul Alam, Mohammad Anwar Siddique, Huzzat Ullah, **Munawar Sultana**, M Anwar Hossain. Near-Complete Genome Sequence of a Potential Foot-and-Mouth Disease Virus Serotype A Vaccine Strain Isolated from Bangladesh. Microbiol Resour Announc 8:e00031-19. https://doi.org/10.1128/MRA .00031-19.

Alam ASMRU, Ali MR, Siddique MA, Ullah H, **Sultana M**, Hossain MA. 2019. Near-complete genome sequence of a representative strain within a rare foot-and-mouth disease virus O/ME-SA/Ind2001BD2 sublineage from Bangladesh. Microbiol Resour Announc 8 (37):e00705-19. https://doi.org/10.1128/ MRA.00705-19

Zahid Hassan, Munawar Sultana, Sirajul I Khan, Martin Braster, Wilfred FM Röling, Hans V Westerhoff. Ample arsenite bio-oxidation activity in Bangladesh drinking water wells: A bonanza for bioremediation? Microorganisms 7(8) 246

Munawar Sultana, Anowar Khasru Parvez, Khandokar Fahmida Sultana, Sanjoy Kumer Mukharje, M Anwar Hossain. Characterization of extended spectrum β-Lactamase producing bactieria isolated from urinary tract infections. Bangladesh Medical Research Council Bulletin 45 (1), 23-33

2018

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D. Seminar publication: (selected)

1. Bacterial diversity in arsenic contaminated overburden soils and the corresponding genes of arsenite oxidase, published in ***Biospectrum-das magazine für Biowissenschaften***, 2009, abstract no: PO21, page 146.
2. Tracking of *Shigella* in Bangladeshi surface water: a comparative analysis of *Shigella* spp. and its close relatives, published in ***FEMS 2009 program book- Microbes and Man-independence and future challenges***, page 51.
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E. Conference Proceedings: (more than 200; selected provided)

1. Sultana, M., Hossain, M.A. (July, 2012). Pollution of Antibiotic resistant bacteria: Prospective studies on spreading of antibiotic resistance, food hygiene and aquaculture in Bangladesh. International conference on Green Chemistry for sustainable development, Jessore Science and Technology University, Jessore, Bangladesh. P: 30-34, ISBN: 978-984-33-5307-8

2. Sultana M., Nandi S. P. and Hossain M. A.; 'Prevalence of Multidrug Resistant Zoonotic Bacteria in Poultry of Bangladesh'; was published in Asian Food Security Association (AFSA) conference proceedings December 2012.

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F. Conference presentation:
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Rahman A., Ashraf M. A., Nandi S. P., Alam S. M. S., Zaman F., **Sultana M.**, Hossain M. A.; 'FMD Virus Genotyping Tool' (Poster Presentation). International Training Workshop on Bioinformatics and computational biology in South Asian perspective held on September 25-26 in Chittagong, Bangladesh. (Acquired the first price).

Poster on **"Emergence of multidrug resistance zoonotic *Salmonella* from poultry of Savar, Bangladesh"** was presented in1st AFSA (Asian Food Security Association) on Food Safety and Food Security, 15-17, 2012, Osaka, Japan.

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Poster on **"Antigenic Variation of Capsid Protein VP1 of Foot-and-Mouth Disease Virus Prevalent in South Asian Region"** was presented in1st AFSA (Asian Food Security Association) on Food Safety and Food Security, 15-17, 2012, Osaka, Japan.

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Poster on "**Serological cross-reactivity of environmental isolates of *Enterobacter, Escherichia, Stenotrophomonas* and *Aerococcus* with *Shigella* spp. specific antisera**" was presented in **11th Asian Conference** on Diarrhoeal Diseases and Nutrition March 8-10, 2006, Bangkok, Thailand.

Poster on **"Bacterial diversity in arsenic contaminated overburden soils and the corresponding genes of arsenite oxidase"** was presented as a poster in 60th Annual conference on Association for General and Applied Microbiology **(VAAM)** 8-11 March, 2009, Bochum, Germany.

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National

1. Sabrin Bashar, Santonu Kumar Sanyal, M Anwar Hossain and **Munawar Sultana** (2015) Mechanism of Carbapenem Resistance in clinical *Pseudomonas* spp. in Bangladesh. International Conference (29th AGM), Bangladesh Society of Microbiologist (BSM), Abstract No# 105.

2. Farzana Diba, Santonu Kumar Sanyal, Sadikur Rahman , Mala Khan, M Anwar Hossain and **Munawar Sultana** (2015) Isolation and Molecular Profiling of Arsenotrophic Bacteria from Ground water and Soil of Arsenic prone Areas in Bangladesh. International Conference (29th AGM), Bangladesh Society of Microbiologist (BSM), Abstract No# 106.

3. Khondokar Fahmida Sultana, Mohammad Anwar Siddique, **Munawar Sultana** and M Anwar Hossain (2015) Screening and Molecular Characterization of Multidrug Resistant *Salmonella* spp. from Poultry Samples. International Conference (29th AGM), Bangladesh Society of Microbiologist (BSM), Abstract No# 104.

4. Juthika Mandal, Mohammad Anwar Siddique, **Munawar Sultana** and M Anwar Hossain (2015) Validation of Real Time PCR assay for Detection and Quantification of *Salmonella* spp. International Conference (29th AGM), Bangladesh Society of Microbiologist (BSM), Abstract No# 108.

5. Ram Prosad Chakrobarty, **Munawar Sultana**, Saddlee Shehreen, Selina Akhter and **M Anwar Hossain** (2015) Contribution of Efflux Pump *qnr*S and DNA gyrase Alteration in Ciprofloxacin Resistance in *Escherichia* spp. International Conference (29th AGM), Bangladesh Society of Microbiologist (BSM), Abstract No# 103.

6. SM Sabbir Alam , Arafat Rahman, Sadikur Rahman, Saddam Hossain **Munawar Sultana** and **M Anwar Hossain** (2015) A Comprehensive Study of FMDV Genotypes Using FMDV Genotyping Tool. International Conference (29th AGM), Bangladesh Society of Microbiologist (BSM), Abstract No# 101.

7. Ovinu Kibria Islam, Dirk Bockmuehl, **Munawar Sultana,** M Anwar Hossain (2015) Efficacy of Sanitizing Agents on *Pseudomonas fluorescence* Migula 1895 Biofilm on Food Processing Surfaces. International Conference (29th AGM), Bangladesh Society of Microbiologist (BSM), Abstract No# 102.

8. Samina Momtaz, Arafat Rahman, **Munawar Sultana** and M Anwar Hossain (2015) Prediction of Peptide Vaccine Epitopes for Foot-and-Mouth-Disease Virus Prevalent in Bangladesh. International Conference (29th AGM), Bangladesh Society of Microbiologist (BSM), Abstract No# 109.

9. Md. Inja-Mamun Haque, Mohammad Anwar Siddique, Santonu Kumar Sanyal, Anwar Hossain, **Munawar Sultana**, Mahmud Hasan, M Anwar Hossain (2015) Seasonal Prevalence of White Spot Syndrome Virus (WSSV) in Cultured Tiger Shrimp (*Penaeus monodon*) of Bangladesh. International Conference (29th AGM), Bangladesh Society of Microbiologist (BSM), Abstract No# 155.

10. Huzzat Ullah, Mohammad Anwar Siddique, Ram Prosad Chakrabarty, Md. Rahmat Ali, Arafat Rahman, **Munawar Sultana**, M. Anwar Hossain (2015) Isolation and Genome Analysis of Circulatory Foot-and-Mouth-Disease Virus in Bangladesh. International Conference (29th AGM), Bangladesh Society of Microbiologist (BSM)

11. Poster on 'Microbial quality of raw, powdered and pasteurized milk samples originated from cows and camels in Bangladesh' was presented and awarded 2nd prize in the science fair organized by NSU-Life science club, in 2010.

12. **Sultana M.,** Naeem N., Sultana F., Nandi S. P., and Hossain M. A**. (2013).** 'Antibiotic Pollution and Occurrence of Multi-Drug Resistant (MDR) Bacteria in Environments of Bangladesh' is submitted in First International conference on biotechnology (ICB) May 25-26, 2013; in Bangladesh.

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