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**CURRICULUM VITAE**

**MD. ANWAR HOSSAIN, Ph.D.**

Professor (Former) Department of Microbiology, University of Dhaka

Vice Chancellor (Former) Jashore University of Science and Technology

Awarded Ekushey Podok 2022 on Science and Technology, National award;

Bangladesh Academy of Sciences (BAS) & The world Academy of Science, Fellow;

Gold Medal 2018 BAS; Best Researcher Award 2011 & Gold Medal 2018 UGC

**CONTACT**

**Resident:** Ishaq Sky Tower, Building No. 10; Flat No. B-10; Road No. 4; Dhanmondi

Dhaka 1209; Bangladesh; Tel: 01715-363753; E-mail: hossaina@du.ac.bd

Website: [www.microbialgen.du.ac.bd](http://www.microbialgen.du.ac.bd)

World Bank:

<https://blogs.worldbank.org/endpovertyinsouthasia/combating-foot-mouth-disease-bangladesh>

Google Scholar: <https://scholar.google.com/citations?user=j5yQevgAAAAJ&hl=en>

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| **MAJOR CONTRIBUTIONS IN SCIENCE AND TECHNOLOGY DEVELOPMENT**:  * Established a number of world class infrastructure, academic and research facilities in Jashore University of Science and Technology (JUST). Genome Center is one of them in which among the public universities we have first started COVID-19 test and still continuing. We also established complete genome of circulating SARS CoV-2 from south-eastern part of Bangladesh. Established The Centre for Sophisticated Instrumentation and Research. In both Centre, I was director during.
* Developed molecular genetics and bioinformatics BSL-2 laboratory in the department of microbiology, Dhaka University. This is a state-of-the-art facility developed under HEQEP industry-academia, MoE, GoB and TWAS, Italy funding. In this facility me and my team developed Foot-and-Mouth Disease Vaccine mono-, di- and tri-valent. We have completed field trial and submitted for IP-right in Bangladesh and in India. My team established a FMDV-seed bank of all circulating strains in Bangladesh. We have established genome sequences of all vaccine and circulating strains 1st in Bangladesh and its epidemiology.
* 1st Established Mastitis metagenome in Bangladesh. Our data established 1st Mastitis microbiome based on Whole Genome Sequencing (WGS). Proposed microbiome interactions for the progression of the disease. Established mouse model for mastitis disease which is a break- through important step for doing further research on mastitis preventions.
* Established genomics, metagenomics and microbiome research in DU and JUST. My team is one of the pioneer research groups in this field in Bangladesh and completed As-microbiome, Mastitis microbiome and COVID-19 diabetics microbiome.
* Established genomes of good numbers clinically important bacteria of hospitals and veterinary origin - *Pseudomonas aeruginosa* DMC30b, *Escherichia fergusonii* strain OTSVEF–60, *Citrobacter freundii* Strain NR-12, *Achromobacter aegrifaciens* BAW48 and more.
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## ACADEMIC RECORDS

* **Postdoctoral Scholar**, Department of Molecular Genetics, Microbiology and Immunology, Rutgers University, UMDNJ-RWJMS, New Jersey, USA, 2002 - 2004.
* **Postdoctoral Scholar**, Suntory Institute for Bioorganic Research. Osaka, Japan, 1997-1999.
* **Ph.D**., Department of Pharmaceutical Analytical Chemistry, Faculty of Pharmaceutical Sciences, University of Tokyo, Japan, 1991.
* **M.Sc**. (thesis group), Department of Biochemistry, Faculty of Biological Sciences, University of Dhaka, Bangladesh. 1st Class, 1983.
* **B.Sc**., Department of Biochemistry, Faculty of Biological Sciences, University of Dhaka, Bangladesh. 1st Class, 1981.

**SPECIAL ACADEMIC TRAINING AND DEPLOMA**

* ‘Special Training on Project, Procurement and Financial Management’ UGC & World Bank, January, 2011.
* ‘Biosafety training on Blood Born Pathogen’ UMDNJ-RWSMS, NJ. USA, 2005**.**
* ‘Radioisotope handling training’ Rutgers University, USA, 2002, 2004.
* Course completed on ‘Developmental Neurobiology’ at International School of Neurobiology, Italy, 1990. Funded by Fidia Research Foundation
* ‘Radioisotope handling’, University of Tokyo, Japan. 1988, 1990.
* Worked as research student on bioactive peptide purification from Joro spider. University of Tokyo, Department Pharmaceutical Analytical Chemistry, Japan 1988. Funded by Ministry of Education, Japan.
* Bacterial genetics specifically on gene fusion technology on *Salmonella* Typhimurium. Chinese University of Hong Kong, Hong Kong, 1987. Funded by Commonwealth Commission.
* ‘Cell and cell organelles’. Madurai Kamraj University, India, 1985.Funded by UNESCO and Singapore National University.

## EMPLOYMENT RECORD

* Professor, Department of Microbiology, Faculty of Biological Sciences, University of Dhaka, Bangladesh. 1997-to date.
* Research and Teaching Specialist II, Department of Molecular Genetics, Microbiology and Immunology, UMDNJ-RWJMS, New Jersey, USA, Sept. 2004- Sept. 2005.
* Scientist, Suntory Institute for Bioorganic Research, Suntory Co. Osaka, Japan. 1999-2002.
* Associate Professor, Department of Biochemistry and Molecular Biology, Faculty of Biological Sciences, University of Dhaka, Bangladesh. 1995 - 1997.
* Assistant Professor, Department of Biochemistry and Molecular Biology, Faculty of Biological Sciences, University of Dhaka, Bangladesh. 1991 -1995.
* Lecturer, Department of Biochemistry and Molecular Biology, Faculty of Biological Sciences, University of Dhaka, Bangladesh. 1984 -1991.

**VISITING PROFESSOR**

* Visiting Professor, 1996. Department of Cultural Fisheries, Faculty of Agriculture, Kochi University, Japan.
* Visiting Professor, 2012. Faculty of Life Science, Rhein-Waal University, Germany.

**HONORS AND AWARD**

* **Awarded Ekushey Podok 2022 on Science and Technology, National award offered by GoB**
* **Gold Medal on research 2018, University Grants Commission of Bangladesh**
* **Gold Medal 2018, Bangladesh Academy of Science**.
* **Best researcher award 2011, University Grant Commissions of Bangladesh.**
* Young Scientist Travel Award FAOBMB, Japan, 1996.
* Awarded full-fund for 4th Int. Symp.On Protein Structure Function Relationship,Pakistan, 1995. Awarded first prize for best poster.
* Awarded full-fund for 2nd Canberra *B.t.* Conference, Canberra, Australia, 1993.
* Fida Foundation fellowship, awarded by Fida Foundation, Italy, 1991.
* Monbusho Scholarship, awarded by Ministry of Education, Japan, 1988.
* Commonwealth Scholarship, awarded by commonwealth commission. 1987.
* UNESCO fellowship, 1985.
* Merit Scholarship obtained at undergraduate and M.Sc. levels, awarded by
* University of Dhaka, Bangladesh, 1978-1982.

**RESEARCH PROJECTS AND GRANTS: (*Total Updated grant value about than 1.5 million US$***)

1. Development of Vaccine and Effective Diagnostic Kits for Foot-and-Mouth Disease Virus in Bangladesh. Funded by **UGC and World Bank,** 25th June 2015-24th June 2018. Window-4 Industry-Academia Innovation Fund. (**Principal Investigator** (**PI**)).
2. Salmonellosis Control Program in Bangladesh: Development of Cost-Effective Pathogen Detection Method and Vaccine Production. Funded by Ministry of Education, GoB, June 2013 to June 2016. (**PI**).
3. Foot and mouth disease in Bangladesh: genome analysis and vaccine development, Started from Jan., 2011, Funded by **UGC and World Bank,** Completed December 2013. (**PI**)
4. Environmental pollution by antibiotics and resistant bacteria: its impact on dissemination of drug resistance, food hygiene and aquaculture in Bangladesh. ***The World Academy of Sciences for the Developing World*** (**TWAS**), RGA. No. 08-042 LDC/BIO/AS-UNESCO FR: 3240204444**(PI)**.
5. Bio-oxidation of As(III) to As(V) tandem with bio-trapping of As(V)- be the future environment friendly bioremediation technology for As-decontamination. ***Ministry of Science and Information & Communication Technology***, Government of the People’s Republic of Bangladesh. Grant no. bijoprom/sha-9/PRC-24/2009-2010/ongsho-1/ES-5/282 (**PI)**.
6. Dhaka Medical College Wastewater Discharge: A Systematic Study of Its Contribution on the Environment Pollution. ***University Grants Commission of Bangladesh***. Grant no. 6(79)/bimk/gopro/bika/med/(1)/2007-08/2761.(**PI).**
7. Pollution of Antibiotics and Resistant Bacteria: Prospective Studies on Spreading of Antibiotics Resistance, Food Hygiene and Aquaculture in Bangladesh. ***Ministry of Education,***Govt. of the People’s Republic of Bangladesh (**PI)**.
8. White Spot Syndrome Virus (WSSV) in shrimp in Bangladesh: Its characterization and vaccine development. (**PI**).
9. Contribute as **co-PI in** several grants where Professor Monawar Sultana war PI. These grants amounting about more than two hundred thousand US $.

**MAJOR ACADEMIC DEVELOPMENT/CONTRIBUTION:**

1. Established Physiotherapy and Reshabilitation department as founder chairman.
2. Established Genome centre, BSL-2 type animal house and cell culture laboratory in Jashore University of Science and Technology under direct supervision.
3. Developed bioinformatics course and research facilities in the department of Microbiology, University of Dhaka.
4. Developed BSL type 2 biosafety laboratory (1st of this kind in the University) in the department of Microbiology, University of Dhaka.
5. Developed mammalian cell culture laboratory in department of Microbiology and Center of Advance Research for Sciences, University of Dhaka.
6. Established vaccine seed bank and genome sequences of Foot and Mouth Disease Viruses circulating in Bangladesh, department of Microbiology, University of Dhaka.
7. Established microbial and meta-genome research in department of Microbiology, University of Dhaka.

**Major Contribution in Research:**

Development of Foot-and-Mouth Disease Vaccine and establishment of vaccine seed Bank and circulating FMDV genomes; COVID-19 epidemiology and low-cost diagnostic methods and kits development; Mastitis microbiome WGS and mastitis mouse model experimental procedure establishment;

**CURRENT RESEARCH STUDENTS**

* **PhD Researcher: 02**
* **MPhil Researchers: 00**
* **MS Research Student: 00**

**POST-GRADUATE DEGREE AWARDED (THESIS STUDENTS)**

* **PhD degree: 11**
* **MPhil degree: 03**
* **M.Sc. degree: >50**

**RESEARCH COLLABORATIONS**

1. Professor Keith A. Crandall, Computational Biology Institute, Milken Institute School of Public Health, **the George Washington University**, USA
2. Drs. Consuelo Carillo, FMD Expert, **World Organization for Animal Health (OIE), Plum Island, Animal and Plant Health Inspection Service** (APHIS), NY, USA
3. Hernando Duque, APHIS , USDA, USA.
4. Gregory Mayr, APHIS, USDA, USA.
5. Karyn Havas, FADDL, APHIS, USDA, USA.
6. Dr. Amaresh Das, APHIS, USDA-FADDL, NY 11944, USA.
7. Mrigendra Rajput, Medgene Lab., USA
8. Sue Lancaster, Medgene Lab., USA
9. Alan Young, Medgene Lab., USA
10. Industry Partner, Novelta Bestway Pharmaceuticals Ltd., Bangladesh
11. Professor Dirk Bockmuehl, Faculty of Life Science, **Rhein-Waal University**, Germany.
12. Dr. M. L. Bari, PSO, CARS, University of Dhaka, Dhaka-1000, Bangladesh.

**COUNTRY VISITED**

USA, Japan, Canada, Australia, UK, Germany, Netherlands, Turkey, Spain, Italy, India, New-Zealand, Malaysia, Pakistan, China, Hong Kong, Thailand, Singapore, Kuwait, Cambodia, Taiwan.

**MEMEBERSHIPS IN ACADEMIC SOCIETIES AND JOURNALS**

* **Fellow, The World Academy of Science, 2024**
* **Fellow, Bangladesh Academy of Sciences, 2018**
* **President, Bangladesh Society of Microbiologists 2014-2015**.
* **Asian Food Safety and Security Association (ASSFA), Founded December 2010, Founder Co-chairman & member, Vice President 2012-2014**
* Bangladesh Microbiologist Society, EC member and Life member, Former Secretary & Current EC member.
* Bangladesh Society for Pharmaceutical Professionals, EC member.
* Federation of Biological and Chemical Societies, EC member.
* Bangladesh Molecular Biology and Biochemical Society, Life member.
* Bangladesh Association for the Advancement of Sciences, Life member.
* The Society for Neuroscience, USA. Former foreign member.
* Member, New York Academy of Science, USA.
* Member, editorial board, *The Dhaka University J. Biol. Sci.,* 1997-1998, and current board member.
* Member, editorial board, *Bangladesh J. Microbiol*., 2006-2007.
* **Member, American Society of Microbiologist, 2011~date**.
* Editorial Board Member, ***Bangladesh J. Scientific and Industrial Research*.** 2013-date.
* Founding Member, Committee of Action for Research, Extension and Services, 2013.
* **Editorial Board Member, Transboundary and Emerging Disease, Wiley Publisher, 2019-date**.

**MEMBERSHIPS IN ADMINISTRATIVE ACADEMIC BODIES**

* Teacher’s representative Senate member, **University of Dhaka** (DU), 1993-1996; 1996-1999; 2009- 2017.
* Register graduate Senate Member, DU, 2023-2026.
* Syndicate member, DU, 1993-1996; 2009-2011.
* Board of Advance Studies, DU. 1997 to 2022.
* Academic Council member, DU 1997 to 2022.
* Chairman, Department of Microbiology, DU, 1997; 2009-2012.
* Syndicate member, **Jahangirnagar University** (JU), Chancellor’s Nominee, 2009-2013.
* Academic Council Member, JU, 2011-date.
* Board of Advance Studies, JU, Academy Council Nominee, 2009-date.
* Syndicate member, **Eastern University**, UGC Nominee, 2011-2017.
* Syndicate member, **Khulna University for Engineering and Technology**, Chancellor’s Nominee, 2012-2021.
* Board of Governor Member, **Hibibullah Bahar Degree College**, Dhaka, 2009-2018.
* Senate member, **National University**, 2013-2016.
* Member, Equivalence committee, **Open University**, 2013-2015.
* Academic Council member, **Sylhet Agriculture University**, 2014-date
* Syndicate member, **Comilla University**, 2019-2023.
* Syndicate, **Noakhali Science and Technology University** 2014-2023.
* Syndicate member, **Begum Rokeya University,** Rangpur, 2021-date

**MEMB ERSHIPS IN NATIONAL RESEARCH ORGANIZATIONS/BODIES**

* **Expert member, National Task Force on National Biotechnology for Bangladesh. Chairperson,** Prime Minister/Head of the Goverment, Government of the People’s Republic of Bangladesh, Since 2010-date.
* **Board Governors Member Bangladesh Council for Scientific and Industrial Research**, (BCSIR), S&IT Minister Nominee, 2009-2016.
* **Council Member**, BCSIR, 2009-2016.
* **Part-time Member**, **University Grants Commission** (UGC) 2018-2020.

**MEMBERSHIPS IN PROFESSIONAL BODIES**

* Joint Secretary, Dhaka University Teacher’s Association, 1993.
* Former Vice-President, Japanese Universities Alumni Association of Bangladesh.

**ORGANIZATION OF NATIONAL/INTERNATIONAL CONFERENCES**

* Chairman, Organizing Committee, 22th and 25th Annual Conference, Bangladesh Society of Microbiologist (BSM).
* Chairman, 5th International Conference on Microbiology, Food Hygiene and Environment. Bangladesh Japan Association for Science and Technology. (This meeting founded AFSSA).
* Co-chairman, Asian Food Security Association, 1st Asian General Meeting, Osaka, September 15-17, 2012.
* Member, organizing committee, 2nd AFSSA meeting, to be held April, 2014, Hanoi Vietnam.

**LANGUAGES**

* Bangle – Native; English- 2nd language read, speck, and write very good;
* Japanese- speak and understand well, read fairly;
* Hindi and Urdu- speak and understand well ;

**LIST OF PUBLICATIONS**

**Dissertation**

1. Study of Methionine Degradation in *Pseudomonas aeruginosa*. M.Sc. thesis, Dhaka University, 1983.
2. Identification, Characterization and Purification of Spider Toxin Binding Protein. Ph.D. Thesis, University of Tokyo, 1991.

**Journal Publications**

**Year 2025**

1. Setu, MAA., Das, PK., Ahammed, T., Saha, S., Hasan, A., Kumar, S., Samiran Das, S., Ahamed, T., Hossain, KMA., Al-Emran, HM., **Hossain, MA.,** Jahid. IK., (2025) Dengue Virus Serotype 2 Cosmopolitan C Genotype Reemerges with a New Bangladeshi Variant in South west Region of Bangladesh. *TBED* (Article ID:8275099) (**Accepted; IF: 3.5**)
2. Rahman, MM., Siddique, N., Gilman, MAA., Hasnat, S., Haider, MG., Rahman, MM., Talukder, AK., Rahman, ANM., Islam, T., Das, ZC., **Hossain, MA**., Hoque, MN. (2025) Genomic and in-vitro analysis of *Pediococcus pentosaceus* MBBL4 implicated its therapeutic use against mastitis pathogens and as a potential probiotic. *Probiotics and Antimicrobial Proteins* (**Accepted, IF: 5.0**).

**Year 2024**

1. Abdul, KM., and Hassan, MH., Ali, MR., and **Hossain, MA** and Aly SAM., Alahmad, W., Sultana, M., Khan, MZH. (2024) Gold-Nanoparticle@Polyaniline Based Positive Electrode for Supercapacitor and Selective Detection of *Escherichia Coli*. Available at SSRN: [https://ssrn.com/abstract=4947996](https://ssrn.com/abstract%3D4947996) or [http://dx.doi.org/10.2139/ssrn.4947996](https://dx.doi.org/10.2139/ssrn.4947996)
2. Hoque, MN., Mannan, ABA., Hossain, A., Faisal, GM., **Hossain, MA**. and Sultana, M., (2024) Arsenotrophic Achromobacter aegrifaciens strains isolated from arsenic contaminated tubewell water and soil sources shared similar genomic potentials, *BMC Microbiol*. (Submission ID cac63365-1ed2-43c0-81e5-8492895a68d1; Accepted; **IF: 4.6**).
3. Hossain, A., Hoque, MN., Bukharid, MZ., **Hossain, MA**. and Sultana, M., (2024) Draft genome sequence of *Achromobacter aegrifa*ciens BAW48 isolated from arsenic contaminated tubewell water in Bangladesh, *MRA* **(**PMC11556077 PMID: [39315840](https://pubmed.ncbi.nlm.nih.gov/39315840/) **(IF: 0.7).**
4. Ghosh, S., Anjume, H., Lipu, AH., M. **Hossain, MA**., Sultana, M., Sharmin Rumi Alim, SR. (2024) Occurrence of Multi-Drug Resistant Pathogenic Bacteria in Hospital Cafeteria Fast Foods of Dhaka, Bangladesh. *SSRN* [https://ssrn.com/abstract=4882864](https://ssrn.com/abstract%3D4882864).
5. Hassan, MH., Ali, MR., Rahman, MA., Hossain, A., Afrin, S., Md. Abdul Khaleque, MA., **Hossain, MA.,** Khan, MZH., Sultana, M. (2024) Proposition of a Phagosensor with a Unique *Teseptimavirus* SAL\_R1S on a Carbon Nanotube Platform for Efficient Detection of Typhoid Pathogen; *Sensors and Actuators Reports.*DOI: <https://doi.org/10.1016/j.snr.2024.100238> (**IF: 6.5**).
6. Al-Emran HM, Rahman, F., Laxmi, S., Das, PK., Provakar, M., Yesmin, S., Pipasha, S., Toukir, A., Rasel, P., Hasan, MS., Lal, S., Rahman, MS., Hossain, A., Mahmudur, R., Kibria, OI., Tanvir, IM., Shireen, N., Selina, A., Alam, ASMR., Rahman, MM., Jahid, IJ., **Hossain,MA**. (2024) Emergence of SARS-CoV-2 variants are induced by coinfections with Dengue*; Bioinformatics and Biology Insights*. **18**: 1-12; <https://doi.org/10.1177/11779322241272399> (**IF:3.7**).
7. Akter, S.; Rahman, M.S.; Islam, M.R.; Akther, Anjume, H.; Marjia, M.; Rahman, M.M.; **Hossain, MA.,** Sultana, M. (2024) Development of recombinant proteins for vaccine candidates against serotypes 0 and A of foot-and-mouth disease virus in Bangladesh. *Access Microbiology*.  [**https://doi.org/10.1099/acmi.0.000713.v1**](https://doi.org/10.1099/acmi.0.000713.v1) ( **IF: 3.6**).
8. Hasan, MS., Rahman, MSR., Das, PK., Alam, ASMR., Islam, OK., Al-Emran, HM., **Hossain, MA**, Jahid, IK. Alternative genome sequencing approaches of SARS-CoV-2 using Ion Ampliseq technology. *Methods X*, <https://doi.org/10.1016/j.mex.2024.102646> (**IF: 2.25**).
9. Haque, MN., et al. (2024) Unveiling Distinct Genetic Features in Multidrug-Resistant Escherichia coli Isolated from Mammary Tissue and Gut of Mastitis Induced Mice. <https://doi.org/10.1016/j.heliyon.2024.e26723> (I**F: 4.45**).
10. Siam, MHB., Sirajee, AS., Limon, MBH., **Hossain, MA**., Sultana, M. (2024) In silico identification of quorum sensing inhibitors against LasR protein in a clinical isolate of multidrug resistant *Pseudomonas aeruginosa* DMC-27b. *F1000Research* <https://doi.org/10.12688/f1000research.131728.1> (**IF:3.32**).
11. Anjume, H., Hossain, KA., Hossain, A., **Hossain, MA**., Sultana, M. (2024) Complete 1 Genome Characterization of Foot-and-Mouth Disease Virus My-466 Belonging to the Novel Lineage O/ME-SA/SA-2018. *HELIYON,* doi: <https://doi.org/10.1016/j.heliyon.2024.e26716>; (**IF: 4.45**).
12. Haque, MN., F. Diba, F., Istiaq, A., Siddique, MA., Mou, JT., **Hossain, MA**. Sultana, M. (2024) Novel Insights into the Co-Selection of Metal-Driven Antibiotic Resistance in Bacteria: A Study of Arsenic and Antibiotic Co-Exposure. *Arch. Microbiol.* **206**(4):194. doi: 10.1007/s00203-024-03873-0. (**IF:2.95**).

**Year 2023**

1. Hoque, MN., Golam Mahbub Faisal, GM., Das, ZC., Tahsin Islam Sakif, TI., Mamun Al Mahtab,MA., **Hossain, MA**., Tofazzal Islam (2023) Genomic Features and Pathophysiological Impact of a Multidrug-Resistant *Staphylococcus warneri* Variant in Murine Mastitis. *Microbes and Infection.* <https://doi.org/10.1016/j.micinf.2023.105285>; (**IF: 5.8).**
2. Hossain, KA., Anjume, H., Alam, KMM., Yeamin, A., Akter, S., **Hossain, MA.,** Sultana, M (2023)Emergence of a novel sublineage, MYMBD21 under SA-2018 lineage of Foot-and-Mouth Disease Virus serotype O in Bangladesh. *Sci. Rep*. **13(**1):9817. doi:10.1038/s41598-023-36830-w (**IF: 4.997**).
3. Diba, F., Hoque, MN., Rahman, MS., Haque, F., Rahman, MKJ., Moniruzzaman, M., Khan, M., **Hossain, MA,** Munawar Sultana, M. (2023) Metagenomic and culture-dependent analysis of groundwater microbiome unveil active microbial community and novel functional genes involved in arsenic mobilization and detoxification. DOI: [10.21203/rs.3.rs-2390178/v1](https://doi.org/10.21203/rs.3.rs-2390178/v1) (**accepted**; *BMC microbiology*; **IF: 4.465**).
4. Islam, OK., Islam, I., Saha, O., Sultana, M., Dirk Bockmuehl, D., **Hossain, MA** (2023) Genomic Variability Correlates with Biofilm Phenotypes in Multidrug Resistant Clinical Isolates of *Pseudomonas aeruginosa*. *Sci. Rep*. **13,** 7867. <https://doi.org/10.1038/s41598-023-35056-0>; (**IF: 4.997).**
5. Saha, O., Rabeya Basri., R., **Hossain, MA.,** Sultana, M. (2023) Characterization of multidrug and heavy metal resistance of carbapenemases producing *Klebsiella pneumoniae* from poultry samples in Bangladesh. *Vet. Med. Sci*. **9:**1685–1701; DOI:10.1002/vms3.1168 (**IF: 2.11**).
6. Rahman, MS., Hoque,MN., Chowdhury, SR., Siddique, MM., Islam,OK., Galib, SM., Md. Tanvir Islam, T., **Hossain, MA.** (2023) Temporal dynamics and fatality of SARS-CoV-2 variants in Bangladesh*. Health Sci. Rep.* DOI: 10.1002/hsr2.1209(**IF: 1.95**).
7. Dip, S.D., Sarkar, S.L., Setu, MAA., Das, PK., Pramanik, MHA., Rubayet Ul Alam, ASM., Al-Emran, HM., **Hossain, MA** and Jahid, IQ (2023) Evaluation of RT-PCR assays for detection of SARS-CoV-2 variants of concern. *Sci. Rep.* **13**, 2342. <https://doi.org/10.1038/s41598-023-28275-y> (I**F: 4.994**)

**Year 2022**

1. Asaduzzaman, M., Saha, O., Islam, A., Nasrin, N., Islam, S., Ahmed, M., Sultana, M., **Hossain MA** and Lehmann, C (2022) Emergence of multi-drug resistant *Salmonella* Typhi and *Salmonella* Paratyphi A in Bangladesh. *Life*, **12**, x. <https://doi.org/10.3390/xxxxx>; (**IF: 2.99)**.
2. Rahman, KMJ., Diba, F., Shuvo, MSR., Siddique, MA., **Hossain, MA** and Sultana, M. (2022) Metagenomic investigation of bacterial community of arsenic-prone area in the northwest region of Bangladesh. *Bangladesh J Microbiol*, **39**(1): 31-38.
3. Hoque, MN, Rahman, SM., Md. Murshed Hasan Sarkar, MMH., Ahashan Habib, MA., Akter, S., Banu, TA., Goswami, B., Jahan, I., **Hossain, MA.,** Khan, MS., Islam, T., (2022)

Transcriptome analysis in nasopharyngeal samples reveals increased abundance and diversity of opportunistic fungal pathogens in COVID-19 patients (2022) *PLOS ONE* (PONE-D-22-14092R1; **Accepted; IF: 3.752**).

1. Al‐Emran, HM., Rahman, MS., Hasan, MS., Alam, ASMRU, Islam, OK., Anwar, A., Jahid, IK., **Hossain, MA**. (2022) Microbiome analysis revealing microbial interactions and secondary bacterial infections in COVID-19 patients co-morbidly affected by type 2 diabetes. *J Med Virol*. doi: 10.1002/jmv.28234 (**IF: 20.69**).
2. Hoque, MN., Jahan. MI, **Hossain, MA,** Sultana, M., (2022) Genomic diversity and molecular epidemiology of a multidrug resistant *Pseudomonas aeruginosa* DMC30b isolated from hospitalized burn patient in Bangladesh. *J. Global. Antimicrobial Resist*. <https://doi.org/10.1016/j.jgar.2022.08.023> (**IF: 4.035**).
3. Das, PK., Mandal, A., Rahman, MM., Sarkar, SL., Jahid, IK., **Hossain, MA.,** Alam ASMRU and Roy, PC. (2022) *Salmonella enterica* Serovar Typhimurium and Enteritidis Isolated from Raw Shrimp in Bangladesh: An Investigation Based on Molecular Characteristics, Survival, Virulence, Antibiotic Resistance, and Biofilm Formation Attributes. *J. Food Quality*, **2022** ID 3420364; <https://doi.org/10.1155/2022/3420364>  **(IF: 3.2**).
4. Alam, ASMRU., Islam, OK., Hasan, MS., Al‐Emran, HM., Md. Jahid, IK., Crandall, IK., **Hossain, MA**. (2020) Dominant Clade-featured SARS-CoV-2 Co-occurring Mutations Reveals Plausible Epistasis: An *in silico* based Hypothetical Model. doi: *J Med Virol.* 2022 Mar;94(3):1035-1049.doi: 10.1002/jmv.27416. (**IF: 20.69**).

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1. Hoque, MN., Rahman, MS., Islam, T., Sultana, M., Crandall, KA., M. **Hossain, MA** (2022) Induction of mastitis by cow-to-mouse fecal and milk microbiota transplantation causes microbiome dysbiosis and genomic functional perturbation in mice. *Animal Microbiome*. **4**: 43; <https://doi.org/10.1186/s42523-022-00193-w> (**IF: 9.133**).
2. Sarkar, SL., Alam, ASMRU., Das, PK., Pramanik, MHA., Al-Emran, HM., Jahid, IK., **Hossain, MA.** (2021) Development and validation of cost-effective one-step multiplex RT-PCR assay for detecting the SARS-CoV-2 infection using SYBR Green melting curve analysis. *Sci Rep* **12**, 6501. <https://doi.org/10.1038/s41598-022-10413-7> (**IF: 4.994**)
3. Hasan, MM., Hoque, MN., Ahmed, F., Haque, MI., Sultana, M., and **Hossain, MA (2022)** Circulating phylotypes of White Spot Syndrome Virus in Bangladesh and their virulence**.** *Microorganisms*,**10(**1), 191;<https://doi.org/10.3390/microorganisms10010191> **(IF: 4.926).**

**Year 2021**

1. Reuben, RC., Sarkar, SL., Roy, PC, Anwar, A., **Hossain, MA** & Jahid, IK. (2021) Prebiotics, probiotics and postbiotics for sustainable poultry production. *World's Poult. Sci. J.* <https://doi.org/10.1080/00439339.2021.1960234> (**IF: 2.914).**
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**Manuscript under Review**

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2. Islam, OK., Islam, I., Saha, O., Sultana, M., Bockmueh, D., **Hossain, MA** (2023) Genomic variability correlates with biofilm phenotypes in multidrug resistant Clinical Isolates of *Pseudomonas aeruginosa* strains (DOI:[10.21203/rs.3.rs-2151002/v1](http://dx.doi.org/10.21203/rs.3.rs-2151002/v1) submitted, under review).

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**Contributions and Presentations in National Academic Conferences:**

More **than 100 abstract published** and presented in different national academic conferences.

**Invited Lecture/ Keynote Talk/Plenary talk**

1. Systematic Analysis of Foot-and-Mouth Disease in Bangladesh: Epidemiology, Vaccine Failure and Containment (2024) 6th AFSSA conf. Oct2-4, Bangkok, Thailand.
2. Hossain, MA. (2023) Effect of Climate Crisis in the Emergence of Zoonotic Viruses with an Emphasis of SARS-CoV-2. Osaka University, Japan. 27-03-2023.
3. Hossain, MA. (2023) Antibiotics resistance, the silent killer: Bangladesh scenario in global perspective. East West University, Bangladesh. 19-03-2023.
4. Hossain, MA (2021) Strategic Assessment of Covid-Long Covid Pandemic in Bangladesh- Perspective for Sustainability. Bangladesh Association for the Advancement of Science, 10 September, 2021.
5. Hossain, MA (2021) Foot-and-mouth disease in Bangladesh: Current scenario and containment. International Conference on Science and Technology for Celebrating the Birth Centenary of Bangabandhu (ICSTB-2021), BCSIR, 11-13 March 2021 (Keynote talk).
6. Hossain, MA (2021) Foot-and-Mouth Disease Scenario in Bangladesh: Vaccine Failure and Remedy. 2nd ICAL 2021, [www.icalsbstu.org](http://www.icalsbstu.org) (Keynote talk).
7. Hossain, MA. (2019) Foot-and-Mouth Disease: Global Scenario and Asia Perspective. ICESMT-2019, Baramati, India, February 7, 2019 (**Keynote talk**)
8. Hossaina, MA. (2018) Molecular characterization of Foot-and- Mouth Disease Virus in Bangladesh from 2012 to 2016, 10th AFOB regional symposium, Dhaka, Bangladesh.
9. Hossain, MA (2017) Progressive control pathway for FMD: success and failure in achieving the target control program in Bangladesh, *14th Ann. Sci. Conf.* *CVASU*, April 1-2, 2017.
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13. **Hossain, M.A.** (2014) Antibiotic Resistances in Bangladesh: The Current Scenario. **Keynote talk**, Bangladesh Society for Pharmaceutical Professionals. May 23, 2014.
14. **Hossain, M.A.** (2012) Prevalence of Multidrug Resistant Zoonotic Bacteria in Poultry of Bangladesh. Asian Food Security Association (AFSA) Ann. Conf. Sept. 15-17, 2012, Osaka Prefecture University, Japan (**Keynote talk**).
15. **Hossain, M.A.** (2011) Identification and characterization of a cell surface immunoprotective glycoprotein from fish pathogen: *Lactococcus garvieae* and efficacy of it as protective vaccine against Lactococcosis in fish. Organized by Department of Fisheries, Dhaka University and Fisheries department, Government of Bangladesh.
16. **Hossain, M.A.** (2011) *Salmonella* in poultry of Bangladesh: its prevalence, antibiotic resistance and zoonoses, International Conference on Scinece, Asiatic Society, September 27-29, Dhaka (**Keynote talk**)
17. **Hossain, M.A.** (2011) Hospital liquid waste and its impact in environment pollution, Organized Faculty of Biological Sciences, Chittagong University. (**Keynote talk**)
18. **Hossain, M.A,** (2011) Anthrax in Bangladesh: prevention and cure, Organized by Department of Pharmacy, City University
19. **Hossain, M.A**. (2009) Hospital wastewater: its impact in antibiotics and resistant bacteria pollution in Bangladesh, Tohuku University, Japan
20. **Hossain, M.A**. (2002) Calreticulin –a Ca2+ binding protein involves in Ca2+-signaling in glutamate receptor, UMDNJ, NJ, USA
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**Complete Genome of Foot-and-Mouth Disease Viruses**

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**Complete genomes Bacteria**

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2. Saha,O., Rahman,MS., Islam,MR., **Hossain,MA**. and Sultana,M.(2020), Charaterization of Multidrug resistance *Escherichia Coli*; NCBI BioProject: PRJNA659847; BioSample: SAMN15928329; Accession: JACVMS000000000.
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