CV OF JAKIR HOSSAIN

Email: jakir.mfog@sau.edu.bd, Cell phone: +8801912423894
Nationality: Bangladesh, Gender: Male

Research interest:

- Marine molecular biology, functional genomics, marine fisheries & genetics

Education

- **Erasmus Mundus Joint MSc in Marine Environment and Resources,** MER2030 EMJMD, U Bordeaux (France), U Basque Country (Spain), U Liège (Belgium), Stazione Zoologica Anton Dohrn (Italy), 2024.
  Thesis: Characterization of the TOR Complex 1 in the model diatom *Phaeodactylum tricornutum* in response to nutrient availability
- **Master of Science in Fisheries**, Department of Fisheries, University of Dhaka, Bangladesh, 2017 (**2nd** position among the cohort).
  Thesis: Identification of oxidative stress responsive microRNAs (miRNAs) in economically important fishes of Bangladesh.
- **Bachelor of Science in Fisheries**, Department of Fisheries, University of Dhaka**,** Bangladesh, 2016 (**3rd** position among the cohort).
  Internship: Induced Breeding of Indian Major Carps

Professional experience

Assistant Professor, Dec 2020 – Present, Department of Marine Fisheries and Oceanography, Sher-e-Bangla Agricultural University, Bangladesh
Lecturer, Dec 2018 - Dec 2020, Department of Marine Fisheries and Oceanography, Sher-e-Bangla Agricultural University, Bangladesh

Course taught at undergraduate level (B. Sc. in Fisheries): Physical, geological, chemical, & biological oceanography, marine ecology, marine environmental pollution.

Major technical skills

- Laboratory techniques: DNA RNA extraction, cDNA, Primer design, PCR, Real-time PCR, Cloning, proteolistic transformation, Gene expression analysis, CRISPR/Cas9, microscopy.
- Research experiences in fisheries and genetics: Aquaculture and breeding, Diatom culture, Zebrafish culture, genetic diversity, fish biology, biodiversity assessment, length-weight.
- Bioinformatic skills: Phylogeny, Ensembl, NCBI genbank, Primer3, Plaza, DiatOmicBase, CRISPOR, CHOPCHOP, TargetScan Fish, QIIME 2, miRDB, miRBase.
- Basic application of R and Python.

Selected publications

Journal articles

1. **Hossain, J.**, Khan, M.S., Akter, S., Rabbane, M.G., Khan, H., Kundu, G.K., & Paul, B. (2020). Deciphering Oxidative Stress Responsive MicroRNA (miRNA) in Hilsa (*Tenualosa ilisha*) and Rohu (*Labeo rohita*). *Genetics of Aquatic Organisms*, 4, 97-110. http://doi.org/10.4194/2459-1831-v4_2_05.
2. Kabir, T., Anwar, S., Taslem Mourosi, J., **Hossain, J**., Rabbane, M. G., Rahman, M. M., Hosen, M. J. (2020). Arsenic hampered embryonic development: An in vivo study using local Bangladeshi *Danio rerio* model. *Toxicology Reports,* 7, 155–161. https://doi.org/10.1016/j.toxrep.2019.12.009.

3. Azad, M. A. K., Rahman, M. S., Rabbane, M. G., Kabir, M. A., Raknuzzaman, M., & **Hossain, J.** (2022). Genetic diversity of wild zebrafish *Danio rerio* populations available in Bangladesh. *Ecological Genetics and Genomics*, 23, 100116. https://doi.org/10.1016/j.egg.2022.100116.
4. Rabbane, G., Ali, Y., Zahid, A., & **Hossain, J**. (2020). Diet Effects on Growth, Mortality, RNA: DNA Ratio and Gene Expression of Zebrafish Danio rerio. *Genetics of Aquatic Organisms*, 4, 19-27. http://doi.org/10.4194/2459-1831-v4_1_02.
5. Nadia, Z.M., Roy, P., **Hossain, J.**, Hossain, M.F., Rahman, M., Salam, M.A. and Jahan, R. (2022). Fish availability and market channel in Rajbari, Bangladesh. *Heliyon*, *8*,9, p.e10526. DOI: 10.1016/j.heliyon.2022.e10526.
6. Kamal, S. A., Chad, N. A., **Hossain, J.,** Ferdous, A., Jahan, R. (2022): Availability of marine fishes in Cox's Bazar, Bangladesh: A case study on the BFDC landing center. *Croatian Journal of Fisheries*, 80, 133-140. DOI: 10.2478/cjf-2022-0014.
7. Kamal, S.A., Khanam, A., Hossain, J., Ferdous, A. and Jahan, R. 2023.Socio-economic conditions of dry fishers and wholesalers: A case study of the coastal dry fishing communities of Bangladesh. Asian Journal of Fisheries and Aquatic Research, 25(4): 149-158. DOI: 10.9734/ajfar/2023/v25i4692.
8. Jahan, R., Chad, M.N.A., Hossain, J. and Kamal, S.A. 2024. The Marketing Margin and Profit Structure of Nine Commercially Important Marine Fish Species in the Southeast Coastal Areas of Bangladesh. Journal of Agribusiness and Rural Development, 74(4), 389-401. DOI: http://dx.doi.org/10.17306/J.JARD.2024.00001.

Book chapters

1. **Hossain, J.**, Hossain, M.F. and Jahan, R., 2022. Anammox processes in marine environment: Deciphering the roles and applications. In *Development in Wastewater Treatment Research and Processes* (pp. 297-318). Elsevier.
2. **Hossain J.** and Jahan R. (2021). Biofuel: Marine Biotechnology Securing Alternative Sources of Renewable Energy. In: Maddela N.R., García Cruzatty L.C., Chakraborty S. (eds) Advances in the Domain of Environmental Biotechnology. Environmental and Microbial Biotechnology. Springer, Singapore. https://doi.org/10.1007/978-981-15-8999-7_7.
3. Hossain, M.F., **Hossain, J.** and Jahan, R., 2022. Application of Marine Biofilms: An Emerging Thought to Explore. In *Microbial Biofilms* (pp. 219-251). CRC Press.
4. Paul, B., & **Hossain, J.**, (2022). Blue Economy for Fisheries Development in Bangladesh. In book: Dhaka University Fisheries: Opportunities and Challenges to attain Sustainable Development. Dhaka University Press.

Poster

1. S. Russo Spena, J. Hossain, M. Chiurazzi, M.I. Ferrante, A. Rogato, M.T. Russo. 2024. Investigation into the TOR signaling in diatoms. Poster for communication at XVII Edition of the Congress of the Italian Federation of Life Sciences (FISV) (https://www.fisv.org/comunicazioni/xvi-fisv-congress-padua-september-18-20-2024/).

2. Azeez Olalekan Baki, Jakir Hossain, Leal Athena Alyssa, Jabbarova Fatimeyi Zahra. 2022. Community structure of Megafauna and comparison between seagrass and sand bed in the Arcachon Bay, Southwest France. DOI: 10.13140/RG.2.2.29091.02085.
3. Md. Nasim Mahmud, Jakir Hossain, Roksana Jahan. (2023). Multivariate Morphometric Variability in Mackerel Tuna, Euthynnus affinis, from the Bay of Bengal Coast, Bangladesh. Conference: Fisheries Society of Bangladesh (FSB) – Young Fisheries Scientists Conference, 11 March, 2023, SAU, Dhaka, Bangladesh.

Conference proceedings

1. Ghosh, A., **Hossain, J.**, Hossain, M.F., Ferdous, A., and Jahan, R., 2022. Length-weight and length-length relationships and condition factors of Xenentodon cancila, Anabas testudineus and Heteropneustes fossilis in Arial Beel, Bangladesh, 2022. The 9th Biennial Fisheries Conference & Research Fair, P. 100. https://www.bfrf.org/conference-9th.php.

Research projects

- Intraspecific and interspecific genetic diversity of pomfret fish populations in the Bay of Bengal. Funded by Ministry of science and technology, Bangladesh. 2021-2022. **PI**
- Genetic diversity analysis among wild and hatchery populations of Asian seabass (*Lates calcarifer*) to identify better founder stock for better hatchery production. Funded by Ministry of science and technology, Bangladesh. 2020-21. **PI**

Awards and accolades

- Dean's Award, January 5, 2017, Faculty of Biological Sciences, University of Dhaka.
- National Science and Technology (NST) fellowship in 2016-2017 under the ministry of Science and Technology, Bangladesh.
- Research and Development (R&D) fellowship in 2020-2021 under the ministry of Science and Technology, Bangladesh.

Training, Workshops and Seminars

- Statical data analysis for biological sciences, provided by ISRT, University of Dhaka, Bangladesh, 2016.
- Training on Scientific Paper Writing and Publications, organized and funded by Sher-e Bangla Agricultural University, Bangladesh, 2019.
- Scuba Diving, provided by STARESO (Corsica, France) and University of Liege (Belgium), 2023.

Professional membership

- Bangladesh Fisheries Research Forum (General member)
- Fisheries Society of Bangladesh (General member)

Community services

- Manager, Sristi Mess Dinning, Fazlul Huq Muslim Hall, University of Dhaka, Bangladesh, 2016.

Reference

1. **Dr. Mosammat Salma Akter,** Postdoctoral Research Associate, University of Oxford, UK
   Email: salma.akter@chem.ox.ac.uk, Relation: Thesis Supervisor
2. **Dr. Monia Teresa Russo,** Researcher, Department of Ecosustainable Marine Biotechnology, Stazione Zoologica Anton Dohrn, Naples, Italy

Email: monia.russo@szn.it, Relation: Thesis Supervisor

3. **Dr. Roksana Jahan,** Assistant Professor and Chairman**,** Department of Marine Fisheries and Oceanography, Sher-e-Bangla Agricultural University, Dhaka, Bangladesh
   Email: roksana.mfog@sau.edu.bd, Relation: Professional head and colleague