Mohammad Habibur Rahman Molla

Personal Data

Date of Birth:	15 December 1987
Present Address:	Student Accommodation, King Abdulaziz University, Jeddah, Saudi Arabia
Phone:	+966559873170
email:	saky7009@gmail.com
Personal Website:	fishhubbd.com

Work Experiences

May 2019-August 2020	**(Research Assistant at MAQulate and BBSRC Project)** at WorldFish, UK Assist in standardization of sampling, diagnostic pathology protocols known and emergent disease, increase awareness of pathogens through training aquaculture health professional and aquaculture health professionals and farmers. Provide data, information to developed online training tools and network of trainee and expert pathology for disease of significant to farmed aquatic hosts.
Apr 2016-Sep 2017	**(QC) Quality Control Officer** at Paragon Group, Bangladesh Examined Fish Health and Isolated pathogenic bacteria from the fish organ. Determines, administers, and executes policies relating to administration, standards of hatchery operations, and facility maintenance. Oversees trapping and spawning of fish, egg incubation, and fry rearing, applying knowledge of management and fish culturing techniques. Oversees movement of mature fish to lakes, ponds, streams or commercial tanks. Collects information regarding techniques for collecting, fertilizing, incubating spawn, and treatment of spawn and fry. Confers with biologists and other fishery personnel to obtain data concerning fish habits, food, and environmental requirements.

Research Skill

Wet Lab: Zebra fish culture, breed and treatment for toxicity and diseases analysis, GC-MS, Histology, Various Cell line culture, MTT Assay, ELISA, Cell apoptosis, Cell cycle, Real-Time qRT-PCR, cDNA extraction, DNA, protein & RNA isolation.

Dry Lab: Whole genome sequencing, Multiomics analysis, Transcriptomics, Micro-Array, RNA-Seq, and TCGA Data, Immunoinformatic, Immune Response Simulation, Protein Modelling and Structure Validation, Molecular Docking, Dynamic Simulation, Compounds Screening, DFT, MM-GBSA, & Toxicity, peptide and vaccine design.

Softwares: FISAT II, LaTeX, Python, Maestro, Desmond, YASARA, Microsoft Office, GraphPad Prism, EndNote, SnapGene, Cytoscape, PyMOL, Biovia Discovery Studio, PyRx, LigandScout, MGL Tools, T.E.S.T., Microsoft Office, & Various Server for Data Analysis

Education

Jan 2020-till 2023	Doctor of Philosophy (**PhD**) in Biology, **King Abdulaziz University**, Jeddah, SaudiArabia Thesis Topic: "Isolation of Bio-active compounds from the marine invertebrate fight against to human colorectal cancer CGPA: **4.96/5.00**
Sep 2017-Feb 2019	Master's of Science (**M.Sc.**) in Aquaculture Technology, **Pukyong National University**, Busan, South Korea Thesis Topic: "Thyroid Hormone-Induced Swim Bladder and Eye Maturation are transduced by IGF-1 in Zebrafish Embryos". Advisor: Prof. Christopher Lyon Brown, Ph.D. CGPA: **3.59/4.50**
Jan 2012- Dec 2013	Master of Science (**M.Sc**) in Marine Science, **Faculty of Marine Science, University of Chittagong**, Chittagong, Bangladesh GPA: **3.75/4.00**
Feb 2008-Dec 2011	Bachelor of science (**B.Sc**) in Marine Science, **Faculty of Marine Science, University of Chittagong**, Chittagong, Bangladesh GPA: **3.36/4.00**
2004-2006	Higher Secondary School Certificate (**H.S.C**) in Science, **Brahmanbaria Govt. College**, Brahmanbaria, Bangladesh GPA: **3.90/5.00**
2000- 2004	Secondary School Certificate (**H.S.C**) in Science, **Annada Govt. High School**, Brahmanbaria, Bangladesh GPA: **4.13/5.00**

International Training & Conferences

- "Artificial Intelligence and Drug Discoveries""Centre for Artificial Intelligence in Precision Medicine (CAIPM)".University of Oxford, UK
- CoNISMa has organized the Second Kor-Ita Bilateral Symposium on "Sustainable Fishery", Rome, Italy
- An integrative ligand-based pharmacophore modelling, virtual screening, and molecular docking simulation approaches identified potential lead compounds against pancreatic cancer by targeting FAK1, Pharmaceutical Science Committee, Zurich, Switzerland
- Workshop on the PSMA & complementary instruments and tools. Ministry of Oceans and Fisheries, Busan, South Korea
- Fisheries and Aquaculture Adaptation to Climate Change in Coastal Areas of Bangladesh International Symposium on "Mangroves as Fish Habitat" to be held in Kuala Lumpur, Malaysia.
- Participated in FAO, COFI-Sub-Committee on Fish Trade- 16th Session (FI-709-16), World Fisheries University, Busan, South Korea

Project Co-Investigator

- An integrative ligand-based pharmacophore modeling, virtual screening, and molecular docking simulation approaches iden-tified potential lead compounds against pancreatic cancer by targeting FAK1
- Computational identification of marine fish peptides as a tratment option for multidrug resistant Acinetobacter baumannii

Research Assistant

- Production of Artemia biomass and cysts in indoor tank using crude salt of local saltpan, Financed by the UGC, University of Chittagong, Bangladesh.
- Salt marsh restoration as a community adaptation to climate change impact mitigation in the coastal area of Bangladesh. Financed by the Ministry of Science, Information, and communication technology.
- A comparative study on the ecology of intertidal salt marsh and nearby unvegetated Flat in the coastal area of Bangladesh for sustainable ecosystem health management" funded by Ministry of science and Technology, Bangladesh.

Selected Publications

1. **Molla.**, M.H.R.; Hasan, M.T.; Jang, W.J.; Soria Diaz, C.D.; Appenteng, P.; Marufchoni, H.; Jahan, B.; Brown, C.L. (2019). **Thyroid Hormone-Induced Swim Bladder & Eye Maturation Are Transduced by IGF-1 in Zebrafish Embryos**. Aquaculture Research, 50, 3462–3470, https://doi.org/10.1111/are.14305

2. Islam SI, Hossain B, **Molla** MHR. (2015). **Production of brine shrimp, Artemia salina biomass and cyst in indoor tank using crude salt**. J Chem Biol Phys Science 2015, 2023 Apr 5;2:1574–84.https://www.jcbsc.org/admin/get_filebio.php?id=389t

3. Aljahdali MO, **Molla** MHR, Filfilan WM. (2021). **Whole Genome Sequence of the Newly Prescribed Subspecies Oreochromis spilurus saudii: A Valuable Genetic Resource for Aquaculture in Saudi Arabia**. Journal of Marine Science and Engineering.Volume 46,ISSN 2352-4855; https://doi.org/10.3390/jmse9050506

4. **Molla**, M.H.R.; Mohammed Othman Aljahdali. (2022) **Identification of phytochemical compounds to inhibit the matrix-like linker protein VP26 to block the assembles of White Spot syndrome Virus (WSSV) envelope and nucleocapsid protein of Marine Shrimp: In silico Approach**. https://doi.org/10.1016/j.jksus.2022.102346

5. Aljahdali MO, **Molla** MHR. (2022). **Population dynamics and fecundity estimates of Long-spined Black Sea Urchin Diadema savignyi (Audouin, 1890) from the Red Sea, Saudi Arabia**. Saudi Journal of Biological Science. https://doi.org/10.1016/j.sjbs.2022.103395

6. Sumon MAA, khanam M, Kabir MA, Kari ZA, Iqbal MM, Wei LS, Gabr MH, Asseri AH, Almalki NA, **Molla** MHR. (2022). **Effects of environmental enrichments on ovarian development of Buitta Catfish (Sperata sp.: Family Bagridae) in captivity**. https://doi.org/10.1016/j.ejar.2022.10.002

7. Sumon MAA, **Molla** MHR, Hakeem IJ, Ahammad F, Amran RH, Jamal MT. (2022). **Epigenetics and Probiotics Application toward the Modulation of Fish Reproductive Performanc**. Fish, Fishes 2022, 7(4), 189; https://doi.org/10.3390/fishes7040189

8. Aljahdali MO, **Molla** MHR, Ahammad F. (2021). **Compounds Identified from Marine Mangrove Plant (Avicennia alba) as Potential Antiviral Drug Candidates against WDSV, an In-Silico Approach**. Marine Drugs, 2021 Apr 28;19(5):253. https://doi.org/10.3390/md19050253

9. Rahman MA, Rahman H, Asare OE, Megwalu FO, **Molla** MHR. (2019). **Evaluation of growth**

and production performances of the white sea urchin, Salmacis sphaeroides (Linnaeus, 1758) in a captive aqua-rearing system. Australian Journal of Science and Technology. ISSN Number (2208-6404). https://www.aujst.com/vol-3-1/01_AJST-69_OA.pdf

10. Parvez SM, Rahman A, Jahidul Hm, Rahman H, Farjana N, **Molla** M.H.R (2020). **Combined Effects of Temperature and Salinity on Hatching and Larval Survival of Commercially Important Tropical Sea urchin, Tripneustes gratilla (Linnaeus, 1758)**. Annual Research & Review in Biology. https://doi.org/10.9734/arrb/2020/v35i530219

11. Md. Shafiqul Islam, Alam Pervez, M. Aminur Rahman, **Molla** M.H.R. (2021). **Eco-engineering of coastal environment through saltmarsh restoration towards climate change impact mitigation and community adaptation in Bangladesh**. Regional Studies in Marine Science. https://doi.org/10.1016/j.rsma.2021.101880

12. Islam SM, Pervez A, Rahman MA, **Molla** M.H.R. (2022). **Diversity and seasonal succession of resident and migratory macrobenthic fauna of saltmarsh restoration site at Sonadia Island, Cox's Bazar, Bangladesh**. https://doi.org/10.1016/j.rsma.2022.102460

13. Islam MR, Awal MA, Khames A, Abourehab MAS, Samad A, Hassan WMI, Alam R, Osman OI, Nur SM, **Molla** M.H.R, Abdulrahman AO, Rajia S, Ahammad F, Hasan MN, Qadri I, Kim B. (2022), Molecules. **Computational Identification of Druggable Bioactive Compounds from Catharanthus roseus and Avicennia marina against Colorectal Cancer by Targeting Thymidylate Synthase**. Molecules. https://doi.org/10.3390/molecules27072089

14. Mohammed Othman Aljahdali, **Molla** M.H.R. (2022). **Immunoinformatics and Computer-Aided Drug Design as New Approaches against Emerging and Re-Emerging Infectious Diseases**. IntechOpen, DOI:10.5772/intechopen.101367

15. Hasan, Md Rifat, Ahad Amer Alsaiari, Burhan Zain Fakhurji, **Molla** M.H.R, Amer H. Asseri, Md Afsar Ahmed Sumon, Moon Nyeo Park, Foysal Ahammad, and Bonglee Kim.Haque, S., Rabby, (2022). **Application of Mathematical Modeling and Computational Tools in the Modern Drug Design and Development Process**. Molecules. https://doi.org/10.3390/molecules27134169

16. **Molla** MHR, Aljahdali MO, Sumon MAA, Asseri AH, Altayb HN, Islam MS. (2023). **Integrative Ligand-Based Pharmacophore Modeling, Virtual Screening, and Molecular Docking Simulation Approaches Identified Potential Lead Compounds against Pancreatic Cancer by Targeting FAK1**. Pharmacetuicals. https://www.mdpi.com/1424-8247/16/1/120/htm

17. F A Dain Md Opo, Saleh Alkarim, Ghadeer I. Alrefaei , **Molla** M.H.R.; Nouf H. Alsubhi , Faisal Alzahrani and Foysal Ahammad. (2022). **Pharmacophore-Model-Based Virtual-Screening Approaches Identified Novel Natural Molecular Candidates for Treating Human Neuroblastoma**. Current issue in Molecular Biology. https://doi.org/10.3390/cimb44100329

18. **Molla**, M.H.R F A. Dain Md Opo, Ahad, Amir Alsarir and MD A. Ahmed Sumon (2022) **Identification of novel natural drug candidates against BRAF mutated carcinoma; an integrative in-silico structure-based pharmacophore modeling and virtual screening process**. Frontier in Chemistry, Medicinal and Pharmaceutical Chemistry. https://doi.org/10.3389/fchem.2022.986376

19. **Molla** M.H.R, Md Saddam Hossen, Md Raquibul Islam, Md Iqbal Khan, Foysal Ahammad (2020) **Computational assessment of MCM2 transcriptional expression and identification of the prognostic biomarker for human breast cancer**. Heliyon. https://doi.org/10.1016/j.heliyon.2020.e05087

20. Rahman MA, Ma R, **Molla** MHR, M, Mk S, Sh C, Mm S. (2018). **Snakehead Fish (Channa striata) and Its Biochemical Properties for Therapeutics and Health Benefits**. OPEN ACCESS [Internet]. SF J. Biotechnol. Biomed. Eng. https://scienceforecastoa.com/Articles/SJBBE-V1-E1-1005.pdf

21. **Molla** MHR, et al. (2015), **Spatio-temporal Variations of Macrobenthic Annelid Community of the Karnafuli River Estuary, Chittagong, Bangladesh**. https://www.researchgate.net/publication/299395316_Spatio-temporal_Variations_of_Macrobenthic_

22. Haque MM, Sayed A, Sharif M, Ahmed K, Anwar F, Rani S, **Molla** MHR. (2022). **Distribution and Diversity of Macrobenthos in Sangu River, Bangladesh. Dhaka**. Univ J Earth Environ Sci [Internet]. Bangladesh Journals Online. https://www.banglajol.info/index.php/DUJEES/article/view/55087

23. Haque MM, Sayed A, Sharif M, Ahmed K, Rani S, **Molla** MHR. al. **Macrobenthic Faunal Abundance, Distribution and Diversity in the Bakkhali River, East Coast of Bangladesh**.(2021). Dhaka Univ J Earth Environ Sci [Internet]. Bangladesh Journals Online (JOL); https://www.banglajol.info/index.php/DUJEES/article/view/56279

24. Rahman MA, Ismail M, Parvez MS, Asadujjaman M, Ashik A-A, **Molla** MHR. **Echinoderm fisheries: their culture, conservation, bioactive compounds and therapeutic applications**. J Biol Stud https://onlinejbs.com/index.php/jbs/article/view/7053

25. **Molla** HRM, M, Shafiqul Islam M, Aminur Rahman M, Lee SG, Jahan B, Iqbal J, et al. **An assessment of geo-morphology and hydro-biological factors of major wetlands of Bangladesh**. Water Science & Technology. https://doi.org/10.2166/wst.2018.328

26. Rahman MA, Lee S-G, **Molla** HRM, Asare O, Megwalu F, Jahan B, (2018). **Fisheries management and governance in Bangladesh**. MOJ Ecol Environ Science.

27. Khan MHI, Ahsan SMM, Fatema MK, Iqbal SMS, **Molla** MHR, Gabr MH, et al. **Institutionalizing the Community-Based Management Approach for Natural Wetlands Toward the Exploring Policy Gaps**. Egypt J Aquat Biol Fish [Internet]. The Egyptian Society for the Development of Fisheries and Human Health (ESDFHH); 2022, https://ejabf.journals.ekb.eg/article_273373.html

28. Islam MR, Nirob SS, **Molla** MHR, Rahman K, Haque MM, Rahman MA, et al. **New Records of Two Non-native Clam Species (Bivalvia: Cardiidae) from the Coastal Waters of Bangladesh**. Annu Res Rev Biol. https://journalarrb.com/index.php/ARRB/article/view/30137

29. Rahman MA, Chowdhury SH, Hasan MJ, **Molla** MHR, Yeasmin SM, Farjana N, et al. **Status, Prospects and Market Potentials of the Sea Cucumber Fisheries with Special Reference on Their Proper Utilization and Trade**. Annu Res Rev Biol. https://journalarrb.com/index.php/ARRB/article/view/30250

Awards and Certificates

• I have been selected as a potential candidate from the 30-postgraduate students for attending the Forum on Fisheries Science in the Mediterranean and the Black Sea on 12-16 December, 2018, FAO Headquarters, Rome, Italy.

• Participated in FAO, COFI-Sub-Committee on Fish Trade- 16th Session (FI-709-16) the Grand Hotel, Busan, South Korea.

• I elected as a chief of Major (Aquaculture Technology) during the period of September 2017 to February 2019 consecutively three semesters by the students and staffs vote.

• I had been awarded FAO and South Korean Government Scholarship for the M.Sc program in Aquaculture Technology.

• I have been awarded Saudi Arabia Government Scholarship for my PhD program in Biology.

Languages

Bangla:	Mother tongue
English:	Fluent
Korean:	Basic
Arabic:	Basic

Research Interests

• Aquaculture • Marine Drug • Diseases • Vertebrate & Invertebrate Biology • Peptide design • Vaccine design • Bio-informatics • Drug design • Multi-Omics • Proteomics • Transcriptomics • Zebra Fish trial- In vivo study • Trial on various cancer cell line- In Vitro study

References

1. **Mohammed O. Aljahdali, PhD**, Professor, King Abdulaziz University, Saudi Arabia, Cell: + 966503683106, Email: moaljahdali@kau.edu.sa

2. **Christopher L. Brown PhD**, Professor, FAO World Fisheries University, Pukyong National University, 45- yongso-ro, Nam-gu, Busan 48513, South Korea, Cell: (+82) 10468777752, Email: brownchristopher38@gmail.com

3. **Md. Shafiql Islam Phd**, Professor, Institute of Marine Sciences and Fisheries, University of Chittagong, Bangladesh. Cell: +880-1712062651, E-mail: prof.shafiqims@cu.ac.bd