Curriculum Vitae

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Education

1. Doctoral Student (2nd Year Ph.D.) in the Biology Department, University of Miami, Florida, USA. (Spring 2023 – Present)
2. Master of Science (M.S.) in Biochemistry and Molecular Biology, University of Texas Rio Grande Valley, Texas, USA. GPA: 3.8, Graduation Date: Fall 2022
3. Bachelor of Science (B.Sc. honors thesis) in Fisheries, Fisheries and Marine Resource Technology Discipline, Khulna University, Bangladesh. GPA **3.36.** Graduation Date: December 2017

Publications:

1. Heuer, R. M., Falagan-Lotsch. P., Okutsu. J., Deperalto. M., Umeh, O. G., Guevara. G. A., Noor, M. I., Covington M. A., Shelton, D. S. (2024). Therapeutic Efficacy of Selenium Pre-treatment in Mitigating Cadmium-Induced Cardiotoxicity in Zebrafish (*Danio rerio*). *Cardiovascular Toxicology*. (In press. Accepted: August 8, 2024)
2. Bir, J., Sarker, H., Mita, F. S., Noor, M. I., Kumar, R., Islam, S. S., ... & Huq, K. A. (2024). The impact of salinity and temperature stress on survival, behaviour, immune response, and proximate composition of giant freshwater prawn *Macrobrachium rosenbergii*. *Aquaculture International*, 1-20. https://doi.org/10.1007/s10499-024-01468-6
3. Noor, M. I., & Rahman, M. S. (2023). Roundup® disrupts tissue architecture, attenuates Na+/K+-ATPase expression, and induces protein oxidation/nitration, cellular apoptosis, and antioxidant enzyme expressions in the gills of goldfish, *Carassius auratus*. *Comparative Biochemistry and Physiology Part C: Toxicology & Pharmacology*, 272, 109710. https://doi.org/10.1016/j.cbpc.2023.109710
4. Alrashada, Y. N., Rahman, M. M., Pinkey, I. A., Arafat, S. T., Rahman, S. M., Ferdoushe, Z., Sarower, M. G., Noor, M. I., & Rahman, M. M. (2022). Effects of different rearing temperatures on the expression of some phenotypic traits in a freshwater catfish (*Mystus vittatus*).
5. Rahman, S. M., Mathew, R. T., Alkhamis, Y. A., Alsaqufi, A. S., Golder, J., Noor, M.I., & Rahman, M. M. (2022). Effects of periodic salinity variation on the expression of some phenotypic traits in stripped dwarf catfish (*Mystus vittatus*). JAPS: Journal of Animal & Plant Sciences, 32(1).
6. Rouf, M. A., Antu, A. H., & Noor, I. (2020). Seasonal and annual variability in chlorophyll-a in the shelf region of the Northern Bay of Bengal using MODIS-Aqua data. Oceanological and Hydrobiological Studies, 49(4), 398-407.
7. Bir, J., Das, R., Golder, M. R., Islam, S. S., Paul, P., Noor, M. I., ... & Huq, K. A. (2020). Growth performance and proximate composition of grey mullet *Liza parsia* at different salinities. Bangladesh Journal of Fisheries, 32(2), 277-286.

Manuscript submitted:

1. Noor, M. I., & Rahman, M. S. (2024). Effects of Roundup® on renin expression, oxidative-nitrative stress, and prooxidant-antioxidant homeostasis in goldfish, *Carassius auratus*. *Environmental Toxicology*. Submission ID: TOX-24-785 (Final revision-reviewer recommended publication)
2. Okutsu. J., Noor, M.I., & Shelton, D. S. (2024). Cadmium Toxicity Mechanisms: Insights from Zebrafish Models - A Review. *Current Environmental Health Reports*

Manuscript under preparation:

1. Noor, M. I., & Shelton, D. S. (2024). Transgenerational effects of chronic dietary cadmium on visually guided behavior, activity, cohesion, novel tank response and reproductive success of zebrafish (*Danio rerio*). *Environmental Health and Science perspective*.

Employment History

1. Graduate Research Assistant on the NIH-funded project "Sensory Mechanisms of Cadmium-Induced Behavioral Disorders Across Generations, Project Number: 3R00ES030398-04S1" at the University of Miami (January 2023 – Present). P.I.: Dr. Delia Shelton
2. Graduate Teaching Assistant in the Biology department, University of Miami. Course: Introductory chemistry/biology laboratory (CHM 205 &BIL 163) – (January 2024 – May 2024)
3. Graduate Research Assistant on the project "Comparing the efficacy of single-species and

metabarcoding primer to detect imperiled south Texas amphibian." at the University of Texas Rio Grande Valley– (May 15, 2022, to December 2022). P.I. Dr. Richard Kline.

4. Graduate Teaching Assistant in the School of Earth, Environment and Marine Sciences (SEEMS), University of Texas Rio Grande Valley. Course: Introduction of Environmental Science (ENVR 1402) - (February 2021-December 2022)
5. Graduate Research In Biochemistry and Molecular Biology, University of Texas Rio Grande Valley. (February 2021-January 2022) https://scholar.google.com/citations?user=Pt-LVAoAAAAJ&hl=en&oi=ao
6. Program facilitator at the International Union of Conservation of Nature (July 2018 – December 2019)

Skills/Research techniques

1. Quantification of chemicals/xenobiotics: Expert in freeze drying, acid digestion, conducting ICP-MS to assess bioaccumulation of chemicals and xenobiotics.
2. **Animal Behavior Tracking:** Proficient in utilizing Ethovision, advanced software for tracking social behaviors and swimming patterns in animal models.
3. **Bioinformatics:** Usage of different bioinformatics tools to analyze next-generation sequencing data (RNA-seq, Chip-seq, bisulfite-seq, and ATAC-seq)
4. **PCR Operation:** Skilled in conducting Real-Time Quantitative PCR analysis to measure mRNA levels using gene-specific primers. Experienced in primer design using Primer3 and NCBI Primer-BLAST and conventional PCR, gel electrophoresis, and Sanger sequencing data analysis.
5. **In Situ Tunnel Assay:** Competent in analyzing programmed cell death using in situ tunnel assays.
6. **Immunostaining:** Experienced in identifying various biomarker protein biomarker expressions.
7. **Protein Bradford Assay:** Capable of measuring protein concentrations employing the Bradford protocol with Nano-Drop 2000.
8. **Histology:** Skilled in Hematoxylin and Eosin staining and Silver staining for melanocyte identification.
9. **Statistical Analysis with R:** Expert in conducting various analyses using large datasets. Proficient in statistical modeling, data management, and visualizations using packages like lme4, ggplot, tidyverse, and dplyr.

Volunteer Experience

1. **Internship:** Student Intern at Wildlife Conservation Society (WCS) in the Eco Fish project and MPA (Marine Protected Areas) project (April 2015 to July 2018 during study breaks). Responsibilities included organizing awareness-raising programs, participating in marine megafauna surveys, and conducting campaigns for marine conservation.
2. **Volunteer** at the 3MT presentation contest at Khulna University in 2018.

Awards:

1. Awarded 1st position in the University of Miami Biology 15th annual symposium in January 2024. Poster presentation.
2. Serafy Endowment for Biochemistry and Molecular Biology, University of Texas Rio Grande Valley. Awarded Summer II, 2022.
3. The Presidential Graduate Research Assistantship (PGRA). Awarded by the president's office, University of Texas Rio Grande Valley. Award Year: 2021-2022
4. 3MT presentation contest people's choice award, 2016 in Khulna University

Presentations in Scientific Meetings:

1. Noor, MI., Okutsu, J., Deperalto, MK., Guevara, GA., Gabrielle, UO., Heuer, RM., Shelton, D. S. Selenium's Cardioprotective Effects for Cadmium-Exposed Zebrafish Larvae. Southeastern Society of Environmental Toxicology and Chemistry (SETAC), regional conference, University of Florida, Gainesville, April 2024.
2. Noor, M. I., Qiu, H., Flores, Marriner, J. F., Niemirski, M., Dal Bo, A. B., Niemirski, M., Covington, M., & Shelton, D. S. January 2024. Investigating transgenerational effects of chronic dietary cadmium exposure on vision, behavior, and reproductive success of zebrafish. 15th Annual Symposium, Biology Department, University of Miami, Miami, Florida
3. Noor, M. I., Flores, C., Qiu, H., Dal Bo, A. B., Marriner, J. F., Niemirski, M., & Shelton, D. S. August 2023. The Effects of Dietary Cadmium on Zebrafish Spawning Success Cross-Generationally. Poster presentation, Neuroscience Graduate Program Open House, University of Miami, Miami, Florida.

4. Flores, C., Qiu, H., Dal Bo, A. B., Marriner, J. F., Niemirski, M., Noor, M. I., & Shelton, D. S. July 2023. The Cross-generational Effects of Dietary Cadmium on the Fecundity of Zebrafish. Poster presentation, Undergraduate Research Symposium, University of Miami, Miami, Florida.
5. M.I Noor, M.S. Rahman. April 2022. Exposure to Roundup on Oxidative/Nitrative Stress, Na+/K+-ATPase and Antioxidant Enzymes Expression in the Gills of Goldfish. Oral Presentation at SETAC South Central Annual Conference, Texas State Aquarium, Corpus Christy, Texas.
6. M.I Noor, M.S. Rahman. February 2022. Expression of Oxidative/Nitrative Stress Biomarker and Renin Enzyme During RoundUp Exposure in Goldfish. Texas Academy of Science Annual Meeting, University of Houston Clear Lake, Houston, Texas
7. M.I Noor, M.S. Rahman. January 2022. Effects of Roundup on Nitrative Stress and Renin Expression in Kidney of Goldfish. Society of Integrated and Comparative Biology (SICB) Annual Conference, Phoenix, Arizona.
8. M.I Noor, M.S. Rahman. November 2021. Roundup Exposure Induces Oxidative/Nitrative Stress and Renin Expression in Kidney of Goldfish. Poster presentation at IUTRGV College of Sciences Annual Research Conference, Brownsville, Texas.