

DR. NAHID SULTANA

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Education

Doctor of Philosophy (Ph.D.) **August 2021**
Department of Zoology, University of Dhaka, Bangladesh *Thesis: Relationships between Plankton Population and the Survival of Epidemic Vibrio cholerae in Bangladesh Result: Awarded*

Master of Science (MS) in Zoology (Fisheries) **Session 2005–06 (held in 2009)**
Department of Zoology, University of Dhaka, Bangladesh *Result: First Class (5th position)*

Bachelor of Science in Zoology (4 years) **Session 2004–05 (held in 2007)**
Department of Zoology, University of Dhaka, Bangladesh *Result: First Class (3rd position)*

Higher Secondary Certificate (HSC) **2001**
Cumilla Victoria Govt. College, Cumilla, Bangladesh *Result: First Class (71.3%)*

Secondary School Certificate (SSC) **1999**
Faizunnesa Govt. Girl's High School, Cumilla, Bangladesh *Result: First Class (81.9%)*

Professional Experience

Senior Scientific Officer **July 2017 – Present**
Zoology Section, Biological Research Division, BCSIR Dhaka Laboratories Bangladesh
Council of Scientific and Industrial Research (BCSIR), Dhaka, Bangladesh

Scientific Officer **December 2009 – July 2017**
Zoology Section, Biological Research Division, BCSIR Dhaka Laboratories Bangladesh
Council of Scientific and Industrial Research (BCSIR), Dhaka, Bangladesh

Technical Skills and Competences

- Proximate composition analysis of fish and fishery products (moisture, crude protein, crude fat, ash, crude fiber) following AOAC International standard methods
- Determination of protein (Kjeldahl method), lipid (Soxhlet extraction), and moisture content (oven-drying method)
- Mineral analysis (Ca, Fe, Zn, Mg, Na, K) using AAS technique
- Determination of total carbohydrate and energy value calculation
- Heavy metal analysis (Pb, Cd, Hg, As) in fish and aquatic organisms
- Evaluation of bioaccumulation and biomagnification of nutrients and contaminants in aquatic food chains
- Feed formulation and nutritional evaluation for aquaculture species
- Post-harvest handling, preservation, and value addition of fishery by-products

Computational Skills

- **Programming:** SPSS
- **Operating Systems:** Windows

Research Grants (Selected)

Principal Investigator

- Developing a poultry feed using microalgae and macrophytes
- Fish feed formulation using ZnO nanoparticle and other locally available raw materials
- Isolation and Characterization of Microbiomes and Their Impact in Agar Formation within Agarwood Tree

Publications (Selected)

1. Sharmin, S., Naser, M.N., **Sultana, N.**, Nur, A., Arai, T., Ngah, N. and Hossain, M.B. Seasonal Metabolic and Immune Adaptations of Indian Major Carp Fingerlings in Subtropical Overwintering Aquaculture System. *Aquaculture Research*, **2026**, 2026, 1-13.
2. Rashid, R., Naser M.N. and **Sultana, N.** Organizations of fisheries governance in Bangladesh: A review of institutional governance. *International Journal of Fisheries and Aquatic Research*, **2025**, 13(5), 213-221.
3. Begum, M., Afrahim, S., Jahan, I., **Sultana, N.**, Islam, S. and Jahan, I. Growth Enhancement of Guppy (*Poecilia reticulata*) and Platy (*Xiphophorus maculatus*) with the Dietary Inclusion of Plant and Animal-Based Protein Sources. *Asian Journal of Biological and Life Sciences*, **2025**, 14(2), 1-9.
4. Nahar, N., **Sultana, N.**, Naser, M.N. and Noor, P. Prospects of Leaf and Root Extracts of Drumstick Tree (*Moringa oleifera*) as Eco-friendly Organic Piscicide to Eradicate the Unpleasant Fishes from Culture Ponds. *Asian Journal of Fisheries and Aquatic Research*, **2025**, 27(2), 120-137.
5. Rahman, M.M., Islam, S., Moniruzzaman M., **Sultana, N.** and Begum, M. Assessment of molluscan diversity and their responses to heavy metal deposition in a river ecosystem of Bangladesh. *Journal of Entomology and Zoology Studies*, **2024**, 12(3), 54-61.
6. Afrin, S., Baki, M. A., Chowdhury, M., **Sultana, N.**, Saha S., Sarker A. and Begum, M. DNA barcoding of mislabeled juvenile *Tenuulosa* spp. as *Gudusia chapra* in the fish markets of Bangladesh. *Bangladesh Journal of Scientific and Industrial Research*, **2024**, 59(2), 105-114.
7. **Sultana, N.**, Tista, R.R., Islam, M.S., Begum, M., Islam, S. and Naser, M.N. Microplastics in freshwater wild and farmed fish species of Bangladesh. *Environmental Science and Pollution Research*, **2023**, 1-17.
8. **Sultana, N.**, Mohammad M., Lisa, S.A., Saha, B., Begum, M. and Naser, M.N. Effects of dietary inclusion of Seaweed in regular commercial fish feed on proximate composition, minerals and fatty acid profiling of Nile Tilapia *Oreochromis niloticus* (Linnaeus, 1758). *Aquatic Food Studies*, **2022**, 2(2), 77-86.
9. **Sultana, N.**, Alam, M., Sultana, M. and Naser, M.N. Attachment of *V. cholerae* with plankton biomass in two different ecological zones of Bangladesh. *The Asia Journal of Applied Microbiology*, **2023**, 10(1), 21-30.
10. Ferdousi, L., **Sultana, N.**, Bithi, U.H., Lisa, S.A., Hasan, M.R. and Siddique, M.A.B. Nutrient Profile of Wild Black Soldier Fly (*Hermetia illucens*) Prepupae Reared on Municipal Dustbin's Organic Waste Substrate. *Proceedings of the National Academy of Sciences, India Section B: Biological Sciences*, **2022**.

Accepted Processes

- Production of poultry feed from unused fish scales including natural ingredients
- Production of Nutrient Enriched Ornamental Fish Feed using Spirulina and Natural Ingredients

- Production of Aquarium Fish Feed using Tubifex worms Including Natural Ingredients

Conference Presentations

- Participated and delivered oral presentation at BCSIR Congress-2023, BCSIR, Dhaka 8–10 March 2024
- Participated and delivered poster presentation at BCSIR Congress-2022, BCSIR, Dhaka December 2022
- Participated in International Conference on Environmental Protection for Sustainable Development (ICEPSD-2022) September 2022

Thesis Supervision

- Supervised more than 10 MS Thesis students in various fields of Zoology

Professional Memberships

- Zoological Society of Bangladesh (ZSB) – Life Member
- Bangladesh Academy of Sciences (BAAS) – Life Member
- Scientist Forum of Bangladesh Council of Scientific and Industrial Research
- Bangladesh Association of Women Scientists

Professional Trainings

- Training on "Fourier Transform Infrared and Far Infrared Spectrophotometer (FTIR and FTFIR)", IGCRT, BCSIR 29–30 September 2010
- Training on "ED-XRF", IFST, BCSIR 18–20 December 2012
- Training Program on "Statistical Analysis using SPSS", Bangladesh Computer Council, Agargaon, Dhaka 31 December 2012 – 30 April 2013
- Training on "Real Time PCR", DRICM, BCSIR 23–24 June 2013
- Training Workshop on "DNA Barcoding- Use of Molecular Techniques and Bioinformatics", Chittagong University 2–5 March 2014
- Training on "Potentiometric Titrator with Karl Fischer Unit" 17–18 May 2015
- Training on "Biolog Microbial Identification Systems (For Bacteria, Fungi and Yeast purposes)", IFST, BCSIR 7–11 October 2018
- Training on "Annual Budget Distribution according to PPR-2008 & Discussion on basic software tools (Origin Lab & Turnitin)", BCSIR Laboratories, Dhaka 16 November 2020
- Training on "Basic Principle, Applications, Operation and Maintenance of HPLC", BCSIR Laboratories, Dhaka 26 January 2021
- Training on "Operating and maintenance of Polymerase Chain Reaction (PCR) Machine", BCSIR Laboratories, Dhaka 31 January – 4 February 2021

References

- Available upon request.

Last Updated: Friday 6th March, 2026