

Moussa Attia Moussa

Assistant Lecturer and Researcher

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About me

I am an Assistant Lecturer and a researcher in the Faculty of Science, Cairo University. My duties are teaching and conducting scientific research in aquaculture, and I have published peer-reviewed articles. I am highly skilled in **teaching, writing scientific papers**, and performing statistical analysis for experimental studies using R. Currently, I am expanding my knowledge and refining my skills in **aquaculture sustainability**.

Education

- **M.Sc. in Aquatic Environment**, Cairo University (2019–2022)
Thesis: Evaluation of oxidative stress, genotoxicity, and gene expression alterations as biomarkers for metal pollution in *Oreochromis niloticus* and *Clarias gariepinus*. (2 publications)
 - **B.Sc. Chemistry/Zoology**, Cairo University (2012–2016)
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Work Experience

- **Assistant Lecturer and Researcher**, Zoology Dept., Cairo Univ. (2018–Present)
 - **Designed and conducted aquaculture nutrition research, fish feeding & ecotoxicology trials.**
 - **Execute statistical analysis, biomarker measurement, and gene expression studies.**
 - Teaching & supervising courses related to general **biology and its disciplines like molecular biology cell biology, animal ecology, histology, biochemistry, and biotechnology sciences.**
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Research Skills

- **Laboratory:** Qualified for **Fish feeding trials, histological, biochemical, and oxidative stress assays.** **Genotoxicity** assays: comet assay. **Molecular biology** and **gene expression** techniques: DNA and RNA extraction, Gel electrophoresis, cDNA synthesis, and real-time qPCR analysis. **Biotechnology approaches** include the Bradford assay, SDS-PAGE electrophoresis, Western blotting assay, and Affinity chromatography. Expression and cloning vectors, as well as plasmid

miniprep techniques. Preparation and measurement of Heavy metal concentrations by **Flame atomic Absorption**.

- **Data & Statistics:** Qualified for using **SPSS, GraphPad Prism, R (data wrangling, descriptive statistics, parametric and non-parametric analysis, ggplot2, regression, PCA, cluster analysis, survival analysis, sample size calculations, and other analyses).**
- **Emerging Skills: Introduction to Bioinformatics and Molecular Docking.**

Selected Publications (2024–2025)

Google Scholar: https://scholar.google.com/eg/citations?hl=en&user=243Q8lgAAAAJ&view_op=list_works

1. Radwan, M., Fares, M., Al Malki, J.S., **Moussa M.A.** Elucidating the Effect of Dietary Laminarin on Striped Catfish (*Pangasianodon hypophthalmus*) Growth Performance, Histological Features, Immune-Antioxidant-Related Genes, and Resistance to *Aeromonas hydrophila* Infection. *Probiotics & Antimicro. Prot.* (2025). <https://doi.org/10.1007/s12602-025-10566-7>
2. Radwan, M., Al Malki, J.S., Waheed, **Moussa M.A.** et al. Mitigation Exposed to Acute Cadmium Stress in Nile Tilapia by Dietary Quercetin: Exploring the Growth Performance, Intestinal Health, Stress Biomarkers, and Immune Responses. *Biol Trace Elem Res* (2025). <https://doi.org/10.1007/s12011-025-04686-y>
3. Radwan, M., **Moussa, M.A.**, Manaa, E.A. et al. Mitigating effects of seaweed on gene expression and histological damage in Nile tilapia under acute ammonia stress and bacterial infection. *Aquacult Int* 33, 272 (2025). <https://doi.org/10.1007/s10499-025-01933-w>
4. Radwan, M., **Moussa, M.A.**, Manaa, E.A. et al. Elucidating the protective influence of dietary Juniperus communis extracts on Nile tilapia (*Oreochromis niloticus*) growth, intestinal health, immune-antioxidant, gene expression responses, and resistance to infection. *Aquacult Int* 32, 6727–6752 (2024). <https://doi.org/10.1007/s10499-024-01486-4>
5. Radwan, M., **Moussa, M.A.**, Manaa, E. A., et al. Synergistic effect of green synthesis magnesium oxide nanoparticles and seaweed extract on improving water quality, health benefits, and disease resistance in Nile tilapia. *Ecotoxicology and Environmental Safety*, 280, 116522 (2024). <https://doi.org/10.1016/j.ecoenv.2024.116522>
6. Radwan, M., Abbas, M.M.M., Fares, M, **Moussa, M.A.** et al. Evaluation of Azadirachta indica leaf extracts efficacy against gill flukes parasites with a focus on oxidative stress, pathological changes, and immune gene response in infected Nile tilapia. *Aquacult Int* 32, 10029–10051 (2024). <https://doi.org/10.1007/s10499-024-01648-4>
7. Radwan, M., **Moussa, M.A.**, El-Sharkawy, M.A. et al. The inflammatory, genotoxicity, antioxidants, and pathological response to ectoparasite infection of cultured Nile tilapia. *Aquacult Int* 32, 5393–5412 (2024). <https://doi.org/10.1007/s10499-024-01429-z>

Academic Service & Activities

- Coordinated and supervised undergraduate orientation events at the Faculty of Science, Cairo Univ.

- Member of the student activities team for public engagement.
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Languages

- Arabic (native)
 - English (B2 – reading, writing, speaking, listening)
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References

- **Prof. Amr Adel Abdel-Khalek** – Professor of Environmental Science, Cairo Univ. (ecoamr@cu.edu.eg)
- **Prof. Sherif Abdelaziz Ibrahim** – Professor of Cancer Cell Biology, Cairo Univ. (isherif@sci.cu.edu.eg)
- **Dr. Mahmoud Khairy Mahmoud** – Lecturer of Fish Diseases, Al-Azhar Univ. (MahmoudKhriy.201@azhar.edu.eg)