

Dr. Esraa Ali Zeen Elabdeen Khalil

Lecturer in Biochemistry and Molecular Biology

☒ Cairo, Egypt | ☒ +20 122 850 9561 | ☒ esraa.elaidy@nci.cu.edu.eg



Professional Summary

Experienced and dedicated lecturer with an MD in Biochemistry and Molecular Biology, currently serving in the Cancer Biology Department at the National Cancer Institute, Cairo University. Extensive experience in teaching, molecular techniques, cell culture, and cancer research. Strong background in organizing workshops, mentoring postgraduate students, and publishing in high-impact Q1 journals. Passionate about integrating research with education and advancing cancer biology knowledge.

Education

MD in Biochemistry and Molecular Biology

National Cancer Institute – Cairo University, Egypt

Graduated: 2022

Professional Experience

Lecturer of Biochemistry and Molecular Biology

Cancer Biology Department, National Cancer Institute – Cairo University

2022 – Present

- Teach undergraduate and postgraduate courses in biochemistry and molecular biology.
- Supervise and mentor students in research methodology and thesis development.
- Conduct laboratory training in molecular biology techniques and cell culture.
- Design and implement specialized workshops in molecular diagnostics and experimental biochemistry.
- Publish and contribute to peer-reviewed scientific journals in cancer research.

- Collaborate on departmental research projects focused on cancer mechanisms and signaling pathways.

Skills

- Laboratory Techniques: PCR, RT-PCR, Western Blot, ELISA
- Cellular Techniques: 2D/3D Cell Culture, Apoptosis Assays
- Data Analysis Tools: GraphPad Prism, SPSS
- Scientific Communication: Research Writing, Manuscript Editing, Presentations
- Educational Skills: Academic Teaching, Student Mentorship, Workshop Facilitation
- Soft Skills: Leadership, Time Management, Team Collaboration, Problem Solving
- Software Proficiency: Microsoft Office Suite (Word, Excel, PowerPoint)

Certifications & Courses

- International Computer Driving License (ICDL)
- First Aid Certification
- Presentation Skills Training
- Artificial Intelligence in Research
- Leadership Development Courses (FLDC – Cairo University)
- Numerous conferences and workshops in Biochemistry, Molecular Biology, and Cancer Research

Languages

- Arabic: Native
- English: Fluent

Publications

- **Abdalla R. Mohamed, Hanan H. Georgey, Esraa A. Aidy, Tamer A. Al-Shafie, Mohamed R. Elnagar, Mennatallah A. Ali, Samar S. Elblehi, Abdullah Y. A. Alzahrani, Mai H. A. Mousa** (2025). *Unveiling the potential of xanthines: Discovery of potential 7-benzyl-1,3-dimethylxanthine derivatives as antifibrotic and antioxidant agents.* *Bioorganic Chemistry*, 114, 105157. <https://doi.org/10.1016/j.bioorg.2025.105157>
- **Aidy, E. A., El-Wetidy, M. S., Reda, N. M., Sheded, A. H., Al-Otibi, F., Al-Hamoud, G. A., & Mwaheb, M. A.** (2024). *Versatile properties of Opuntia ficus-indica (L.) Mill. flowers: In vitro exploration of antioxidant, antimicrobial, and anticancer activities, network pharmacology analysis, and In-silico molecular docking simulation.* *PLOS ONE*, 19(11), e0313064. <https://doi.org/10.1371/journal.pone.0313064>
- **Aidy, E. A., Fathy, Z., Ahmed, W., El-Gendy, S., Abou-Bakr, A., Omran, M., & Al-Shafie, T. A.** (2022). *Jasonia montana Extracts Stimulate Cell Differentiation in HCT-116 and*

Caco-2 Cell Lines. Egyptian Journal of Chemistry, 65(12), 165–174.
<https://doi.org/10.21608/ejchem.2022.113827.5252>

Khalil, A. H., Khalil, A. A., Aidy, E. A., Said, M. A., Kebeish, R., & Al-Badwy, A. H. (2024). *Biochemical and molecular docking-based assessment of Spirulina platensis bioactive constituents for their potential application as natural anticancer drug. Algal Research*, 82, 103624. <https://doi.org/10.1016/j.algal.2024.103624>

"Inhibition of Drp1 orchestrates the responsiveness of breast cancer cells to paclitaxel but insignificantly relieves paclitaxel-related ovarian damage in mice"
Scientific Reports, 13, 22782.