

ESRAA MOHAMED GOMAA AWADALLAH

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SUMMARY

- Actively engaged post-graduate student in fungal endophyte sequencing, molecular biology, phytochemistry, analytical chemistry, as well as plant biology and biochemistry, with a focus on pharmacological applications.
- Strong communicator and presenter with seven years of teaching experience, excelling both independently and in teamwork.
- Proficient in diverse research methodologies, encompassing plant extraction, fractionation, and comprehensive chemical and biological investigations into plant active constituents. Additionally, skilled in the culturing and sequencing of fungal DNA. Adept in various aspects of research, including data analysis, experimental design, problem-solving, and conducting meticulous literature reviews.
- Committed, ambitious, and continuously seeking opportunities for academic and research growth, driven by a pursuit of excellence in personal and professional development.

EDUCATION

BSc in Pharmacy and Pharmaceutical Sciences, Faculty of Pharmacy, Future University, Egypt. **2017**

- With honors (Ranked Top 10 with cGPA : 3.94)

MSc in Pharmacognosy and Medicinal Plants, Faculty of Pharmacy, Ain Shams University, Egypt. **2018- Current**

Expected graduation date (December 2024)

RESEARCH EXPERIENCE

M.S. Thesis Project “phytochemical and biological studies on physalis peruviana L. Family Solanaceae and it’s leaves extract remedied Cyclophosphamide induced neurobehavioral toxicity.”

- Conducted extensive research involving the extraction, fractionation, and assessment of active constituents using various chemical assays such as NMR and LC-MS/MS.
- Lead the preparation of a well-structured and accurately planned research proposal.
- Carried out a series of rigorous in-vitro and in-vivo investigations, employing state-of-the-art pharmaceutical experimental equipment, including UV spectrophotometer, Centrifuge, Lyophilizer, HPLC–DAD–QTOF-MS/MS and HPLC.
- Identified different plant endophytes through culturing, DNA extraction, and sequencing using Sanger and high-throughput methods. Culturing isolated microorganisms, DNA extraction obtained genetic material, and sequencing techniques confirmed specific genes.
- Skillfully gathered essential data through direct observation, precise manipulation, and meticulous experimentation.
- Demonstrated a high level of scientific reasoning, crucial in guiding the research process.
- Employed advanced data visualization techniques by constructing informative charts and conducting thorough data analysis and presentation.

Won a USAID Scholarship for 4 months in the United States at which I gained various skills and techniques including :

- 1- Novel techniques in different sequencing platforms and applications of software tools for fungal genome extraction.
- 2- High Throughput Sequencing Technologies.
- 3- UPLC QTOF LC-MS.
- 4- Various software such as R programming software.

PUBLICATIONS

“Unleashing the Power of Golden Berry Leaf Extract to Counteract Cyclophosphamide's Toll with Antioxidant, Anti-Inflammatory, Anti-Apoptotic, and Neurotransmitter Boosting Effects “

Research article extracted from my master’s thesis, Under review in Ethnopharmacology.

TEACHING EXPERIENCE

Faculty of Pharmacy and Pharmaceutical Industries, Department of Pharmacognosy and Medicinal Plants, Future University, Egypt (FUE) **2017 – Present**

Teaching Assistant

2017 – Present

- Instructed pharmacy undergraduates in practical courses covering topics like forensic toxicology, marine natural products, phytochemistry, and quality control of natural products.
- Guided students in carrying out the required quality control tests, how to properly handle and use the laboratory equipment and devices including the microscope.
- Preparing tutorials’ presentations.
- Offered comprehensive academic support, including one-on-one and group review sessions, office hours’ assistance, and answering academic queries.
- Maintained a disciplined learning environment by ensuring adherence to regulations.
- Assisted lecturers with recordkeeping, including attendance and grading.
- Actively participated in Journal Clubs to stay current with medicinal plants research.

PREVIOUS INTERNSHIPS

Participated in a training program sponsored by the United States Agency for International Development (USAID) in the pharmacognosy, medicinal plants and endophytes department under the supervision of Assoc. Prof. dr. Anthony Amend (Pacific Biosciences Research Center) at University of Hawai'i at Mānoa for 4 months. **January – April 2023**

- Collaborated with esteemed faculty and industry experts, benefiting from their extensive knowledge.
- Regularly attended journal clubs, seminars, and symposia to stay updated on industry trends.
- Enhanced critical analytical and problem-solving skills.
- Contributed in a graduate-level “Microbiome Bootcamp” class.
- Experience in fungi culturing techniques & sub-isolation based on morphological characteristics.
- Developed expertise in the implementation of PCR for high-throughput sequencing (HTS) and running gel electrophoresis.
- Experience in diverse extraction techniques such as spin column extraction that can be used for DNA extraction from a variety of sources, including human, fungal, and plant DNA.
- Acquired knowledge and skills in foliar endophyte DNA extraction, PCR, and library preparation.
- Gained knowledge in various computerized software tools and skills, including R programming, Cimaiki pipeline, and phyloseq, although further refinement and practice are still desired as I initially had no prior experience in these areas.

2014 - 2017

Elmaghrabi Pharmacy, Cairo, Egypt

- Reviewed and interpreted physician orders to prepare and dispense medications.
- Identified therapeutic incompatibilities and advised on substitutions.
- Provided patient counseling on dosing, administration, and potential side effects.
- Managed and organized technicians' work schedules and tasks.
- Communicated with drug suppliers and manufacturers.

El Nile Company

2016

- Conducted quality control and assurance tests on different dosage forms.
- Trained in the Microbiology unit for different fungi and contamination detection.

ATTENDED COURSES / WORKSHOPS

- Completed "Learning Projects in Blended Learning Format" online course by the German Academic Exchange Service "DAAD" in 2022.
- Finished the "Psychological First Aid" online course via Coursera in 2022.
- Completed "Self-Management" online course by "DAAD" in 2021.
- Completed "Proposal Writing Master & PhD" online course by DAAD in 2021.
- Completed "Academic Research Skills" online course by DAAD in 2021.
- Finished "Understanding Medical Research" online course via Coursera in 2021.
- Attended a session on "Egyptian Knowledge Bank for Scientific Research & How to Use EndNote Program" at Future University in Egypt in 2018.
- Participated in a session on "Biometrics, Benchmarking, and Impact Factors" at Future University in Egypt in 2016.
- Attended a session on "University Ranking Systems" at Future University in Egypt in 2016.
- Participated in a session on "Professional Ethics" at Future University in Egypt in 2015.
- Completed a First Aid Course at Cairo University in 2013.

SERVICE EXPERIENCE

OTHER PROFESSIONAL ACTIVITIES

Organizing committee for "FUE International Conference on Pharmaceutical Technology" Cairo, Egypt (2019-2022).

Organizer in the 5th International conference of pharmaceutical sciences by Future University in Egypt (2019).

Volunteer at the pharmacy team at the Egyptian medical caravan by Faculty of Pharmacy, Ain Shams University (2018).

TECHNICAL SKILLS

- Microsoft office (Word, Excel, and Power-point): Excellent
- UV-Probe: Excellent
- Mzmine software: Excellent
- End-note and Mendeley reference program: Excellent
- IBM SPSS Statistics 25: Excellent
- Spectroscopy
- HPLC–DAD–QTOF-MS/MS
- Clevenger apparatus
- NMR spectroscopy
- Identification and culturing of fungi
- R studio software: Basic