

# Curriculum Vitae

## I. Basic Information:

**Name:** Walaa Ahmed Eraqi  
**Title:** Lecturer Dr.  
**Department:** Microbiology & Immunology  
**Website:** [https://scholar.google.com/citations?hl=en&user=bTpskIoAAAAJ&view\\_op=list\\_works&sortby=pubdate](https://scholar.google.com/citations?hl=en&user=bTpskIoAAAAJ&view_op=list_works&sortby=pubdate)



## II. Education:

Degree obtained	Dates (from-to)
Ph.D. (Microbiology & Immunology), Faculty of Pharmacy, Cairo University, Cairo, Egypt.	May 2015 – September 2019
M.Sc. (Microbiology & Immunology), Faculty of Pharmacy, Cairo University, Cairo, Egypt.	April 2012 – July 2014
B.Sc. (Pharmaceutical Sciences), Faculty of Pharmacy, Cairo University, Cairo, Egypt.	September 2004 - May 2009

## III. Employment History:

Employer	Position	Dates (from – to)
Faculty of Pharmacy, Cairo University, Cairo, Egypt	lecturer	October 2019 – Current
Faculty of Pharmacy, Cairo University, Cairo, Egypt	Assistant lecturer	August 2014 - October 2019
Faculty of Pharmacy, Cairo University, Cairo, Egypt	Demonstrator	April 2011 - August 2014
Central Administration for Pharmaceutical Affairs (CAPA), Registration Department	Member of specialized scientific committee	May 2010 -April 2011

## IV. Career History and Research Interest:

- My master thesis was focusing on isolation and characterization of novel Surface-active agents-producing strains from different environmental sources and improving the productivity of these isolates by metabolic engineering tools.
- Regarding my PhD., we investigated the spatial and temporal variations of the microbial communities defining the Nile microbiome as well as determining the water quality and the presence of antibiotic resistance determinants along its flow through Greater Cairo using 16S rRNA gene high-throughput sequencing and bioinformatics analysis tools.

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- My post-doctoral research includes looking for novel antimicrobial agents and their possible mechanisms of action against different life-threatening pathogens as an alternative therapy to overcome the emergence of the resistance to conventional antibiotics. Alternative therapies includes the use of probiotics, antimicrobial peptides, phage lytic enzymes, screening for microbes with potential bioactive metabolites and others. In addition, I have been working on different project that investigate the microbiological quality of different freshwater systems and the antimicrobial resistance in these environments using sequence-based metagenomics.

## V. Academic Activities

### Teaching Activities:

- Involved in teaching different undergraduate courses, and postgraduate courses, including both master's and diploma programs, within the Microbiology and Immunology department at Cairo University's Faculty of Pharmacy.
- Teaching the Advanced Biotechnology course to postgraduate students pursuing their master's degree within Future University in Egypt's Microbiology and Immunology department.

### Other Activities:

#### 1. Publications/Conference abstracts:

- Studies on Isolation and Characterization of Surface Active Compounds- Producing Bacteria. Aymen S. Yassin, Amal E. Ali, Magdy A Amin. **(4<sup>th</sup> International Scientific Conference of Faculty of Pharmacy, Cairo University, 2013).**
- Production of Rhamnolipid biosurfactant from glycerol by *Pseudomonas aeruginosa*. Walaa A. Eraqi, Aymen Samir Yassin, Amal E. Ali, Magdy A Amin. **(The V International Conference on Environmental, Industrial and Applied Microbiology, Madrid, Spain, 2013)**
- Utilization of Crude Glycerol as a Substrate for the Production of Rhamnolipid by *Pseudomonas aeruginosa*. Walaa A. Eraqi, Aymen Samir Yassin, Amal E. Ali, Magdy A Amin. **Biotechnology research international 2016.**
- The Nile River Microbiome Reveals a Remarkably Stable Community Between Wet and Dry Seasons, and Sampling Sites, in a Large Urban Metropolis (Cairo, Egypt). Walaa A. Eraqi, Marwa T Elrakaiby, Salwa A. Megahed, Noha H Yousef, Mostafa S Elshahed, Aymen Samir Yassin. **Omics: A journal of integrative biology 2018.**

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- Microbial community structure of the Nile river water around Cairo metropolis. Walaa A. Eraqi, Marwa T Elrakaiby, Salwa A. Megahed, Noha H Yousef, Mostafa S Elshahed, Aymen Samir Yassin (**The 17<sup>th</sup> meeting of International society of microbial ecology, Leipzig, Germany 2018**).
- Spatiotemporal microbial community analysis of the Nile river along the Cairo urban metropolis. Walaa A. Eraqi, Marwa T Elrakaiby, Salwa A. Megahed, Noha H Yousef, Mostafa S Elshahed, Aymen Samir Yassin (**8th Congress of European Microbiologists (FEMS 2019), Glasgow, Scotland, UK 2019**).
- Spatiotemporal Analysis of the Water and Sediment Nile Microbial Community Along an Urban Metropolis. Walaa A. Eraqi, Marwa T Elrakaiby, Salwa A. Megahed, Noha H Yousef, Mostafa S Elshahed, Aymen Samir Yassin. **Microbial Ecology, 2021.-**
- Unravelling the beehive air volatiles profile as analysed via solid-phase microextraction (SPME) and chemometrics. Aida A Abd El-Wahed, Mohamed A Farag, Walaa A Eraqi, Gaber AM Mersal, Chao Zhao, Shaden AM Khalifa, Hesham R El-Seedi. **Journal of King Saud University-Science, 2021.**
- Ubiquinol preserves immune cells in gamma-irradiated rats: Role of autophagy and apoptosis in splenic tissue. Nora Mohamed Elkenawy , Heba Ramadan Ghaiad, Sherehan Mohamed Ibrahim , Ramy Karam Aziz , Eman Rashad, Walaa Ahmed Eraqi. **International Immunopharmacology, 2023.**
- Ultra-deformable free fatty acid based nano-carriers for topical delivery of Luteolin: A potential paradigm for management of Methicillin-Resistant Staphylococcus aureus skin infections. Mohamed Y. Zakaria, Walaa A. Eraqi, Sally A. Mohamed. **International Journal of Pharmaceutics, 2023.**

## 2. Projects

- Assessment and mitigation of antimicrobial resistance in freshwater
  - **Principal Investigator:** Dr. Ali Hassan Ali Elbehery, Lecturer of Microbiology and Immunology, Faculty of Pharmacy, the University of Sadat City.
  - Supported financially by the University of Sadat City for the USC Competitive Applied Research Fund.
  - Participants from Faculty of Pharmacy, Cairo University: Prof. Dr. Ramy Karam Aziz, and Prof. Dr. Ayman Yasin
  - Participants from Sadat University: Dr. Akram Mostafa, Dr. Mohamed Bakr, and Dr. Manar Aleslam Mattar.

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## 3. Attended Conferences:

- 4<sup>th</sup> International Scientific Conference of Faculty of Pharmacy, Cairo University "Pharmacy Education and Community Expectations" (**April 2013**).
- 5<sup>th</sup> International Scientific Conference of Faculty of Pharmacy, Cairo University "Pharmacy at the Cutting-Edge: Facing Future Challenges" (**April 2014**).
- The TWAS/BioVision Alexandria. NXT 2014, Alexandria, Egypt, (**April 2014**).
- 8<sup>th</sup> international scientific conference of Faculty of Pharmacy – Cairo University "Pharmacy in Egypt: Ensuring Access to Health", (**April 2017**)
- 9<sup>th</sup> international scientific conference of Faculty of Pharmacy, Cairo University "Globally Recognized Egyptian Pharmaceutical Ingredients- A National Priority", **April 2018**).
- Transitional Multidisciplinary Research Conference of University of Greenwich and October University for Modern Science and Arts (**October 2018**).
- 27th International Symposium on Hepatitis C Virus and Related Viruses (HCV2021), Virtual (**January 2021**).

## 4. Scientific Workshops and Training:

Title	Organizer	Year
Bioinformatics for Biologists: an introduction to Linux, Bash Scripting, and R.	Future learn (online).	2021
European Molecular Biology Laboratory (EMBL) Ensembl Workshop	American University, Cairo (AUC)	October, 2021
Advanced Metagenomics Workshop	DR. George wells (Northwestern University, US)	January, 2019
Metagenomic Workshop	Center of Genome and Microbiome, Research, Faculty of pharmacy Cairo University	2019
Arabic and English Editing in Scientific Research	Faculty and leadership Development Center, Cairo University	2019
Statistical Analysis of Bio-Experiments		2018
Total Quality Management in Healthcare		2016
Bacterial Cell Factory BTC-011	Biotechnology Center, Faculty of pharmacy Cairo University	2013
Bioinformatics BTC-003		2012
Technology of Upstream Bioprocess BTC-009		2012