

# Mark Medhat Abdel Massih Garas

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## **Work Address:**

Department of Microbiology and Immunology  
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<https://shorturl.at/kniLv>

## **Date of Birth**

February 3, 1989

## **Education**

### **PhD degree in Pharmaceutical Sciences**

June 2024

Faculty of Pharmacy Cairo University (Cairo, Egypt)

**Major:** Microbiology and Immunology

**Dissertation:** Elucidating the possibility of fusidic acid use in the treatment of vancomycin resistant enterococcal infection and its potential resistance mechanisms

### **MSc Degree in Pharmaceutical Sciences**

July 2018

Faculty of Pharmacy Cairo University (Cairo, Egypt)

**Major:** Microbiology and Immunology

**Dissertation:** Effect of nickel limitation on virulence of *staphylococcus aureus*.

### **BSc Degree in Pharmaceutical Sciences**

May 2011

Faculty of Pharmacy Cairo University (Cairo, Egypt)

Honors: Distinction with honors (92.52%)

## **Work Experience**

**Lecturer of Microbiology and Immunology.**

June 2024 – Present

**Assistant Lecturer of Microbiology and Immunology.**

July 2018-2024

**Teaching Assistant of Microbiology and Immunology.**

Sept 2012 – 2018

Faculty of Pharmacy Cairo University (Cairo, Egypt).

- Teaching Microbiology practical sessions to undergraduate and postgraduate students, including Cell Biology, General Microbiology and Immunology, Pharmaceutical Microbiology, Pharmaceutical Biotechnology, Pathology and Parasitology.
- Proctoring practical and written examinations.
- Administrative tasks (placing orders for chemicals, glassware, updating inventory).

## **Skills**

### **Technical Skills**

- Operating and maintaining thermocycler, UV spectrophotometer, UV vis- spectro Nanophotometer, pH meter, ELISA plate reader synergy 2.
- Identification of bacterial samples by 16S rRNA PCR amplification method in addition to traditional biochemical methods.
- Primer design using the IDT and NCBI Online Database tools (BLAST tool and Primer Design tool).
- Utilizing CLC Workbench Software for alignments and detection of gene similarities in different samples.
- Extraction of DNA using bacterial lysis and supplier DNAextraction kits.
- Total RNA isolation using bacterial lysis and supplier RNAextraction kits. Amplification of genes using polymerase chain reaction (PCR).
- Visualization of gene bands using agarose gel electrophoresis.
- Purification of PCR products by supplier PCR purification and gel extraction kits.
- Assaying differential gene expression on cDNA through Real-time PCR.
- Performing MIC, MBC and antibiotic susceptibility testing for different bacterial strains.
- *In vivo* evaluation of drugs within Balb/C mice.
- Performing serial passage of bacterial strains in different antibiotic concentrations.
- Detection of gene mutations through sequencing.
- Maintenance of bacterial stocks.
- Assaying the post antibiotic effect and checkerboard assay.
- Troubleshooting problems appeared during constitution of chemically defined media assembled from more than 35 components each was prepared individually.

### **Communication Skills**

- very good communication and contact skills gained through collaboration with my department colleagues during work, and through my experience as a teaching assistant teaching undergraduate students.

### **Computer Software Skills**

- Excellent command of office suite (word processor, excel, publisher, power point presentation software)
- Good command of referencing software (Mendeley)

### **Organizational Skills**

- Preparation and organization of practical experiments for students in their undergraduate and postgraduate levels on a weekly basis.
- Excellent team leading skills gained as team leader for graduation projects.

### **Job related Skills**

- Time management (during conducting multi-task experiments, and employed during the practical sessions for undergraduate and postgraduate students under my supervision)
- Self -confidence (speaking in front of large group of people with different ages).
- Good command of presentation skills (through teaching).

## Posters and Publications

Mark M Abdelmassih, Maha M Ismail, Mona T Kashef, Tamer Essam  
Repurposing fusidic acid as an antimicrobial against enterococci with  
low probability of resistance development, International  
Microbiology journal, doi: 10.1007/s10123-024-00506-w

March-2024

### ASM Poster

Mark M. Abdel Massih, Nourtan F. abdeltawab, Yasser M. Ragab,  
Aisha Salama (2015). Effect of Nickel on Biofilm formation in  
staphylococcus aureus clinical isolates, in the 7th conference of  
American society of Microbiology conference.

October-2015

### Conferences and work shops

دورة متخصصة في اعمال الجودة

\*Citation managers software (Endnote vs Mendeley)

\*Real time PCR

September-2018

February -2016

May-2014

### References

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