

# MOHAMED NABEEL MALASH, M.Sc., Ph.D.

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## EDUCATION

**February 2012- July 2020: Genetic Engineering and Biotechnology Research Institute (GEBRI), University of Sadat City – Sadat city, Egypt.**

**PhD, Genetic Engineering and Biotechnology: *Molecular Microbiology***

Thesis title: "**Production of a Lytic Transglycosylase from a Group of Novel Extremophilic Peptidoglycan Hydrolases**"

- Isolation and characterization of novel extremophilic enzymes from metagenomic samples from harsh environments. Bioinformatics and lab work were conducted in the Biology Department, American University in Cairo (AUC).

**October 2004- May 2009: Genetic Engineering and Biotechnology Research Institute (GEBRI), Menofia University – Sadat city, Egypt.**

**Master of Science, Genetic Engineering and Biotechnology: *Industrial Biotechnology* (85.86%)**

Thesis title: "**Production of Cephalosporin C (CPC) using the fungus *Cephalosporium acremonium***".

- Applied Ultraviolet-light mutagenesis for strain genetic improvement of *Cephalosporium acremonium* ATCC 11550.
- Selected high antibiotic-producers among the mutants by agar diffusion method, and then the final selection of the highest producer was carried out in shake flasks and concentration was measured by HPLC.
- Carried out a series of batch and fed-batch fermentation experiments in stirred-tank bioreactor and shake flasks to study different metabolic parameters of the mutant.

**September 1997 - May 2002: Faculty of Pharmacy, Tanta University – Tanta, Egypt.**

**Bachelor of Pharmaceutical Sciences with cumulative grade very good with honor (80.31%, ranked 12<sup>th</sup> out of 802)**

## PROFESSIONAL EXPERIENCE

**October 1<sup>st</sup>, 2020-Present: Ahram Canadian University (ACU), Faculty of Pharmacy – 6<sup>th</sup> of October, Egypt.**

*Lecturer in Microbiology and Immunology Department*

Courses: (Biotechnology and Genetic Engineering, Parasitology and Virology, Pharmaceutical Microbiology, Cell Biology, and Pathology and Parasitology)

**September 2009-September 2020: Ahram Canadian University (ACU), Faculty of Pharmacy – 6<sup>th</sup> of October, Egypt.**

*Assistant Lecturer in Microbiology and Immunology Department:*

**January 2013-June 2020: Biology Department, American University in Cairo (AUC)**

*Research Assistant and Teaching Assistant:*

- Bioinformatics data analysis under supervision of Prof. Rania Siam, Professor of Microbiology, Chair of the Biology Department.
- Teaching Assistant in the “Current Health Issues” (Fall 2015) instructed by Prof. Rania Siam.
- Conducting my PhD bioinformatics and lab research in the Biology Department supervised by Prof. Rania Siam.

**September 2011-September 2012: Taif University, Faculty of Pharmacy – Taif, KSA.**

*Lecturer in Pharmaceutical Microbiology Department*

- Prepared and taught the practical courses of Biology, Pharmaceutical Microbiology, Clinical Immunology, and Parasitology.
- Prepared practical and written exams for the practical sections for the above-mentioned courses.
- Participated in the establishment of Pharmaceutical Biotechnology Research Unit (PBRU).
- Member of Staff Development Committee and Quality Assurance Unit.
- Honored by the faculty administration for my contributions in the educational and research activities in the faculty.

**March 2004-September 2009: Minufiya University Students' Hospital – Shibin Elkom, Minufiya, Egypt.**

*Inpatient Pharmacist*

**July 2004-July 2005: Apex Pharma Co.–Heliopolis, Cairo, Egypt**

*Medical Representative (part time)*

**March 2003-March 2004: Egyptian Naval Forces Hospital–Alexandria Naval Base**

*Soldier and Pharmacist*

**July 2002-February 2007: Community pharmacies in Shibin Elkom, Menofia and Alexandria.**

## **WORKSHOPS AND TRAININGS**

**August 15<sup>th</sup> to October 18<sup>th</sup>, 2022: Wellcome Connecting Science (WCS) and Pan African Bioinformatics Network for H3Africa (H3ABioNet)**

- “Genome Sequencing Bioinformatics Course (GSB 2023)”

**March 22<sup>nd</sup> to October 25<sup>th</sup>, 2022: Wellcome Connecting Science (WCS) and Pan African Bioinformatics Network for H3Africa (H3ABioNet)**

- “Next Generation Sequencing Bioinformatics Training course (NGS Bioinformatics\_2022)” (March 22<sup>nd</sup> to June 20<sup>th</sup>).
- “Introduction to Bioinformatics (IBT 2022)” (July 17<sup>th</sup> to October 25<sup>th</sup>)

**May 8<sup>th</sup> to November 16<sup>th</sup>, 2022: Nasser Higher Military Academy, Egypt**

- *“Thinking Methods and Future Studies” Armed Forces Strategic Studies Center (May 8th to May 25th).*
- *“Strategic Studies and National Security” National Defense College (May 29th to June 12th).*
- *“Crisis Management and Negotiation” National Defense College (June 19th to July 5th).*
- *“Decision Makers” National Defense College (July 17th to August 2nd).*
- *“Technological Advancement and Its Effects on National Security” National Defense College (October 30th to November 16th)*

**September 2015: American University in Cairo (AUC)- New Cairo Campus, AUC Avenue, Egypt**

- *“Teaching Assistant Training”*
- *“Academic Integrity”*

**May 20th, 2015: Institute of International Education and held in Ahrum Canadian University (ACU)**

- *“Research Design, Assessment, and Write-Up” (6 hours).*

**February 18th and 19th, 2015: Biotechnology Center (BTC), Faculty of Pharmacy, Cairo University**

- *“Advanced Bioinformatics Workshop”.*

**January 28th, 2015: Biotechnology Center (BTC), Faculty of Pharmacy, Cairo University**

- *“Pulsed Field Gel Electrophoresis”.*

**May 24<sup>th</sup> to June 21<sup>st</sup>, 2014: Scientific Informatics Research Academy (SIRA)-Egypt**

- *“Bioinformatics Basics” (30 hours).*

**November 2013-March 2014: Ahrum Canadian University (ACU)- 6<sup>th</sup> of October city, Egypt**

- *“Strategic Planning of Institutions of Higher Education” presented by the National Authority for Quality Assurance and Accreditation of Education (NAQAAE) (2 day).*
- *“Team Leadership Workshop” presented by Institute of International Education-Lotus Organization (1 day).*
- *“Road to Accreditation-How to Write Self-Study Report” presented by ACU Faculty of Pharmacy Quality Unit (2 days).*
- *“Road to Accreditation-Pharmacy NARS and Program ILOs” presented by ACU Faculty of Pharmacy Quality Unit (2 days).*

**February 2012 and March 2012: Taif University – Taif, KSA**

- *“Innovation in Teaching Health Sciences: From Words to Action” presented by Faculty of Education, Purdue University, USA (3 days).*
- *“Quality Requirement in E-Learning and Learning Management Systems” (2 days)*
- *“Applied Course in Biostatistics and Use of SPSS in Medical Research” (2 days)*

**October 2010: German Academic Exchange Service (DAAD) in DAAD premises– Zamalek, Cairo, Egypt**

- “Proposal Writing Workshop”

### January 2010: Ahram Canadian University (ACU) - 6<sup>th</sup> of October city, Egypt.

- “Institutional Self-Evaluation of Higher Education” presented by the National Authority for Quality Assurance and Accreditation of Education (NAQAAE).

### August 2007 and May 2008: Hebiraw Co. for Pharmaceutical Raw Materials - Qena, Egypt.

- Production, research, and quality control units. (Total 7 days)
  - Inoculation of the stirred-tank bioreactor.
  - Use of HPLC to determine concentrations of cephalosporin C and its intermediates.
  - Identification and isolation of phenotypic variants of *Cephalosporium acremonium*.

## PUBLICATIONS

- Attia, M. S., Salem, S. S., Elakraa, A. A., Abdel-Maksoud, M. A., Malik, A., Kiani, B. H., **Malash, M. N.**, & El-Sayyad, G. S. (2024). Promising antagonistic effect of bimetallic silver-selenium nanoparticles against *Ralstonia solanacearum*-causing wilt disease in eggplant (*Solanum melongena* L.). *Physiological and Molecular Plant Pathology*, 133, 102369.
- El-Sayyad, G. S., Elfadil, D., Mosleh, M. A., Hasanien, Y. A., Mostafa, A., Abdelkader, R. S., Refaey, N., Elkafoury, E. M., Eshaq, G., Abdelrahman, E. A., **Malash, M. N.**, Rizk, S. H., Gobara, M., Nada, H. G., Hashem, A. H., Attia, M. S., Noreddin, A. M., Abdel Maksoud, M. I. A., Ghobashy, M. M., ... El-Batal, A. I. (2024). Eco-friendly Strategies for Biological Synthesis of Green Nanoparticles with Promising Applications. *BioNanoScience*. <https://doi.org/10.1007/s12668-024-01494-x>
- Abdallah, R. Z., Elbehery, A. H. A., Ahmed, S. F., Ouf, A., **Malash, M. N.**, Liesack, W., & Siam, R. (2024). Deciphering the functional and structural complexity of the Solar Lake flat mat microbial benthic communities. *MSystems*, e0009524.
- Ziko L, Adel M, **Malash MN**, Siam R (2020) Specialized Metabolism Gene Clusters from Red Sea Brine Pool Microbial Metagenomes. *BMC BIOINFORMATICS 21(SUPPL 20)*
- **Malash, M.N.**, Hussein, N.A., Muawia, S., Nasr, M.I., and Siam, R. (2020). An optimized protocol for high yield expression and purification of an extremophilic protein. *Protein Expr. Purif.* 169, 105585
- Ziko L, Adel M, **Malash MN**, Siam R (2019) Insights into Red Sea Brine Pool Specialized Metabolism Gene Clusters Encoding Potential Metabolites for Biotechnological Applications and Extremophile Survival. *Marine Drugs*. **17(5)**:273.
- A.M. Michael and **M.N. Malash** (2015) A Validated Assay of Urease Enzyme in Different Sources Using Silver Nanoparticles. *Food Anal. Methods*. **8(10)**:2482-2486 (DOI: 10.1007/s12161-015-0139-1)
- S.H. Hassanein, M.I. Nasr, R.M. Abd El-Aziz, A.F. Elbaz, and **M.N. Malash** (2009) Induction of Cephalosporin C in *Cephalosporium acremonium* Using U.V. Light and Selection of a Mutant that Showed Highest Fermentation Capability. *Minufiya J. Agric. Res.* **34(1)**:35-55

## PEER REVIEWING ACTIVITIES

- Saqr, E., Sadik, M. W., El-Didamony, G., & Askora, A. (2024). Analysis of a new phage, KZag1, infecting biofilm of *Klebsiella pneumoniae*: genome sequence and characterization. *BMC Microbiology*, 24(1), 211
- Azzeri, A., Mohamed, N. A., Wan Rosli, S. H., Abdul Samat, M. N., Rashid, Z. Z., Mohamad Jamali, M. A., Md Zoqratt, M. Z. H., Mohammad Nasir, M. A., Ranjit Singh, H. K., & Azmi, L. (2024). Unravelling the link between SARS-CoV-2 mutation frequencies, patient comorbidities, and structural dynamics. *PloS One*, 19(3), e0291892.
- Heine, A., Held, S. A. E., Daecke, S. N., Flores, C., & Brossart, P. (2023). Spoilt for choice: different immunosuppressive potential of anaplastic lymphoma kinase inhibitors for non small cell lung cancer. *Frontiers in Immunology*, 14. <https://doi.org/10.3389/fimmu.2023.1257017>
- Mathew, D., & Bhat, S. G. (2023). Production Perspective of Melanin Nanoparticle Synthesized by Novel Marine Bacterial Strain *Pseudomonas Stutzeri* (BTCZ 109) as Anticancer Agent. *Archives of Microbiology*. Rejected.

## EXTRACURRICULAR ACTIVITIES

- **February 2017** General Supervisor of Ibn Sina Medical Convoy to El-Amerya territory, Alexandria Governorate with students and staff of Faculty of Pharmacy, Ahram Canadian University (3 days).
- **February 2014** Leded Ibn Sina Medical Convoy to Bayad El-Arab, Bani Suf Governorate with students and staff of Faculty of Pharmacy, Ahram Canadian University (3 days).
- **February 2013** Participated in Ibn Sina Medical Convoy to Arab ElTarabeen village, Helwan with students and staff of Faculty of Pharmacy, Ahram Canadian University (3 days).
- **August 2010** Participated in Ibn Sina Medical Convoy to Kerdasa territory, Giza Governorate with students and staff of Faculty of Pharmacy, Ahram Canadian University (3 days).

## PERSONAL DATA

**Date of Birth:** July 28<sup>th</sup>, 1980

**Nationality:** Egyptian