

Curriculum Vitae

PERSONAL

Name Sarah Ahmed Abd El kawy Shabayek (Sarah Shabayek)
Gender Female
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IDENTIFIERS

- **Scopus Author Identifier** [26634136200](#)
- **Web of Science ResearcherID** [AAG-1960-2019](#)
- **ORCID** [0000-0001-8218-674X](#)

H-INDEX AND CITATIONS

- **Google Scholar** *h-index*: 10, Citations: 497
- **Scopus** *h-index*: 9, Citations: 291
- **Web of Science** *h-index*: 7, Citations: 237

CURRENT POSITIONS

July 2023 – present **Assistant Professor**, Department of Microbiology and Immunology, Faculty of Pharmacy, Suez Canal University, Ismailia, Egypt.

May 2022 - present **Vice manager**, Quality Assurance and Accreditation Unit, Faculty of Pharmacy, Suez Canal University, Ismailia, Egypt.

December 2021 - present **Manager**, Measurement and Evaluation Unit, Faculty of Pharmacy, Suez Canal University, Ismailia, Egypt.

November 2021 - present **Coordinator**, Virtual Labs, Faculty of Pharmacy, Suez Canal University, Ismailia, Egypt.

June 2017 - present **Member**, Community Service and Environmental Development Center, Faculty of Pharmacy, Suez Canal University, Ismailia, Egypt.

April 2022 - present **Member**, Electronic Exams Committee, Faculty of Pharmacy, Suez Canal University, Ismailia, Egypt.

September 2020 - present **Academic Advisor**, PharmD Clinical Pharmacy Students, Entry year September 2020.

ACADEMIC QUALIFICATIONS

January 2016 **PhD, Doctor of Human Biology (Dr. biol. hum.)** Institute of Medical Microbiology and Hygiene, Medical Faculty, Ulm University, Germany. Thesis title: **Colonization determinants of *Streptococcus agalactiae***

March 2009 **Master of Pharmaceutical Sciences in Microbiology and Immunology.** Microbiology and Immunology Department, Faculty of Pharmacy, Suez Canal University, Ismailia, Egypt. Thesis title: **Epidemiology of Group B Streptococcus in pregnant women**

February 2008 **Pre-Master in Microbiology and Immunology.** Microbiology and Immunology Department, Faculty of Pharmacy, Suez Canal University, Ismailia, Egypt.

May 2007 **General Pre-Master Courses.** Faculty of Pharmacy, Suez Canal University, Ismailia, Egypt.

May 2005 **Bachelor Degree in Pharmaceutical Sciences** Faculty of Pharmacy, Suez Canal University, Ismailia, Egypt.

ACADEMIC POSITIONS

- October 2016 – June 2023 **Lecturer**, Department of Microbiology and Immunology, Faculty of Pharmacy, Suez Canal University, Ismailia, Egypt.
- May 2009 – October 2016 **Assistant Lecturer**, Department of Microbiology and Immunology, Faculty of Pharmacy, Suez Canal University, Ismailia, Egypt.
- September 2005 – May 2009 **Demonstrator**, Department of Microbiology and Immunology, Faculty of Pharmacy, Suez Canal University, Ismailia, Egypt.

GRANTS AND FUNDS

- December 2022 **Open access funding** provided by The Science, Technology & Innovation Funding Authority (STDF) in cooperation with The Egyptian Knowledge Bank (EKB).
- November 2011 – January 2016 **Full Governmental PhD Scholarship** from the Egyptian Ministry of Higher Education.
- October 2015 **Ulm University Grant for Conferences**, Institute of Medical Microbiology and Hygiene, Medical Faculty, Ulm University, Germany.
- September 2015 **Ulm University Grant for Conferences**, Institute of Medical Microbiology and Hygiene, Medical Faculty, Ulm University, Germany.

MEMBERSHIPS

- Deutsche Gesellschaft für Hygiene und Mikrobiologie e.V. (DGHM) (2015-2016)
- The General Syndicate of Egyptian Pharmacists
- The Sub-Syndicate of Egyptian Pharmacists in Ismailia
- Faculty Members Club of Suez Canal University
- Association of Women University Alumni in Ismailia

PUBLICATIONS

- 2023 Khodeer DM, Nasr AM, Swidan SA, **Shabayek S**, Khinkar RM, Aldurdunji MM, Ramadan MA, Badr JM. Characterization, antibacterial, antioxidant, antidiabetic, and anti-inflammatory activities of green synthesized silver nanoparticles using *Phragmanthera austroarabica* A. G. Mill and J. A. Nyberg extract. *Front Microbiol.* 2023 Jan 5;13:1078061. doi: [10.3389/fmicb.2022.1078061](https://doi.org/10.3389/fmicb.2022.1078061). PMID: 36687608; PMCID: PMC9849905.
- 2023 Amin ME, Azab M, Hanora A, Atwa K, **Shabayek S**. Compositional Changes in the Vaginal Bacterial Microbiome of Healthy Pregnant Women across the Three Gestational Trimesters in Ismailia, Egypt. *Microorganisms.* 2023 Jan 5;11(1):139. doi: [10.3390/microorganisms11010139](https://doi.org/10.3390/microorganisms11010139). PMID: 36677431; PMCID: PMC9862816.
- 2023 **Shabayek S**, Abdellah AM, Salah M, Ramadan M, Fahmy N. The vaginal microbiota of healthy pregnant women during their third trimester in Ismailia, Egypt. *Records of Pharmaceutical and Biomedical Sciences*, 2023 ;7(1), 34-48. doi: [10.21608/rpbs.2023.190041.1207](https://doi.org/10.21608/rpbs.2023.190041.1207)
- 2023 Tawfik SA, Azab M, Ramadan M, Salah M, Abdellah A, **Shabayek S**. Alterations of the oral-gut microbiome axis of Egyptian teenagers after Helicobacter pylori eradication therapy. *Records of Pharmaceutical and Biomedical Sciences*, 2023 ;7(2), 53-66. doi: [10.21608/rpbs.2023.189311.1204](https://doi.org/10.21608/rpbs.2023.189311.1204)
- 2022 **Shabayek S**, Vogel V, Jamrozy D, Bentley SD, Spellerberg B. Molecular Epidemiology of Group B Streptococcus Colonization in Egyptian Women. *Microorganisms.* 2022 Dec 22;11(1):38. doi: [10.3390/microorganisms11010038](https://doi.org/10.3390/microorganisms11010038). PMID: 36677330; PMCID: PMC9861799.
- 2022 **Shabayek S**, Abdellah AM, Salah M, Ramadan M, Fahmy N. Alterations of the vaginal microbiome in healthy pregnant women positive for group B Streptococcus colonization during the third trimester. *BMC Microbiol.* 2022 Dec 21;22(1):313. doi: [10.1186/s12866-022-02730-8](https://doi.org/10.1186/s12866-022-02730-8). PMID: 36544085; PMCID: PMC9769055.
- 2022 Hamed SA, **Shabayek S**, Hassan HY. Biofilm elimination from infected root canals using four different single files. *BMC Oral Health.* 2022 Dec 31;22(1):660. doi: [10.1186/s12903-022-02690-5](https://doi.org/10.1186/s12903-022-02690-5). PMID: 36585632; PMCID: PMC9805083.

- 2022 Hefny MHM, Galal SEM, Ahmed, AAA, Mansy MS, **Shabayek S**. Microbial Contamination Of Non-Sterile Pharmaceutical Drops Produced In Egypt. *Bulletin of Faculty of Pharmacy Cairo University*, 2022 ;60(1), 5. doi: <https://doi.org/10.54634/2090-9101.1029>
- 2022 Abo-Hammam RH, Khattab RH, Salah M, Hamad S, **Shabayek S**, Hanora A. (2022). Multi-omics analysis of human gut microbiota in colorectal cancer patients. *Records of Pharmaceutical and Biomedical Sciences*, 6(2), 141-146. doi: [10.21608/rpbs.2022.154796.1161](https://doi.org/10.21608/rpbs.2022.154796.1161)
- 2022 **Shabayek, S**. (2022). *Streptococcus agalactiae* (Group B Streptococcus). In: de Filippis, I. (eds) *Molecular Typing in Bacterial Infections, Volume I*. Springer, Cham. https://doi.org/10.1007/978-3-030-74018-4_8
- 2021 **Shabayek S**, Ferrieri P, Spellerberg B. Group B Streptococcal Colonization in African Countries: Prevalence, Capsular Serotypes, and Molecular Sequence Types. *Pathogens*. 2021 Dec 10;10(12):1606. doi: [10.3390/pathogens10121606](https://doi.org/10.3390/pathogens10121606). PMID: 34959562; PMCID: PMC8706430.
- 2018 **Shabayek S**, Spellerberg B. Group B Streptococcal Colonization, Molecular Characteristics, and Epidemiology. *Front Microbiol*. 2018 Mar 14;9:437. doi: [10.3389/fmicb.2018.00437](https://doi.org/10.3389/fmicb.2018.00437). PMID: 29593684; PMCID: PMC5861770.
- 2017 **Shabayek S**, Spellerberg B. Acid Stress Response Mechanisms of Group B Streptococci. *Front Cell Infect Microbiol*. 2017 Sep 7;7:395. doi: [10.3389/fcimb.2017.00395](https://doi.org/10.3389/fcimb.2017.00395). PMID: 28936424; PMCID: PMC5594096.
- 2017 **Shabayek S**, Spellerberg B. Making Fluorescent Streptococci and Enterococci for Live Imaging. *Methods Mol Biol*. 2017;1535:141-159. doi: [10.1007/978-1-4939-6673-8_9](https://doi.org/10.1007/978-1-4939-6673-8_9). PMID: 27914077.
- 2017 **Shabayek S**. Prevalence of group B streptococcus among pregnant and nonpregnant women in Ismailia, Egypt. *Records of Pharmaceutical and Biomedical Sciences* 2017; 7(1):6-16. doi: [10.21608/RPBS.2018.5915](https://doi.org/10.21608/RPBS.2018.5915)
- 2016 **Shabayek S**, Bauer R, Mauerer S, Mizaikoff B, Spellerberg B. A streptococcal NRAMP homologue is crucial for the survival of *Streptococcus agalactiae* under low pH conditions. *Mol Microbiol*. 2016 May;100(4):589-606. doi: [10.1111/mmi.13335](https://doi.org/10.1111/mmi.13335). Epub 2016 Feb 29. PMID: 27150893.
- 2016 Sendi P, Furlitsch M, Mauerer S, Florindo C, Kahl BC, **Shabayek S**, Berner R, Spellerberg B. Chromosomally and Extrachromosomally Mediated High-Level Gentamicin Resistance in *Streptococcus agalactiae*. *Antimicrob Agents Chemother*. 2016 Jan 4;60(3):1702-7. doi: [10.1128/AAC.01933-15](https://doi.org/10.1128/AAC.01933-15). PMID: 26729498; PMCID: PMC4775929.
- 2014 **Shabayek S**, Abdalla S. Macrolide- and tetracycline-resistance determinants of colonizing group B streptococcus in women in Egypt. *J Med Microbiol*. 2014 Oct;63(Pt 10):1324-1327. doi: [10.1099/jmm.0.077057-0](https://doi.org/10.1099/jmm.0.077057-0). Epub 2014 Jul 22. PMID: 25053798.
- 2014 **Shabayek S**, Abdalla S, Abouzeid AM. Serotype and surface protein gene distribution of colonizing group B streptococcus in women in Egypt. *Epidemiol Infect*. 2014 Jan;142(1):208-10. doi: [10.1017/S0950268813000848](https://doi.org/10.1017/S0950268813000848). Epub 2013 Apr 8. PMID: 23561305; PMCID: PMC9152610.
- 2013 Ragnathan P, Sridaran D, Weigel A, **Shabayek S**, Spellerberg B, Ponnuraj K. Metal binding is critical for the folding and function of laminin binding protein, Lmb of *Streptococcus agalactiae*. *PLoS One*. 2013 Jun 24;8(6):e67517. doi: [10.1371/journal.pone.0067517](https://doi.org/10.1371/journal.pone.0067517). PMID: 23826314; PMCID: PMC3691195.
- 2010 **Shabayek S**, Abdalla S, Abouzeid AM. Comparison of scpB gene and cfb gene polymerase chain reaction assays with culture on Islam medium to detect Group B Streptococcus in pregnancy. *Indian J Med Microbiol*. 2010 Oct-Dec;28(4):320-5. doi: [10.4103/0255-0857.71821](https://doi.org/10.4103/0255-0857.71821). PMID: 20966562.
- 2009 **Shabayek S**, Abdalla S, Abouzeid AM. Vaginal carriage and antibiotic susceptibility profile of group B Streptococcus during late pregnancy in Ismailia, Egypt. *J Infect Public Health*. 2009;2(2):86-90. doi: [10.1016/j.jiph.2009.03.004](https://doi.org/10.1016/j.jiph.2009.03.004). Epub 2009 May 26. PMID: 20701866.
- 2009 **Shabayek S**, Abdalla S, Abouzeid AM. Maternal carriage of group B streptococcus during late pregnancy in Ismailia. *Suez Canal University Medical Journal*. 2009; 12 (1): 109-114

POSTER PUBLICATIONS

- 3-5th November 2021 **Shabayek S**, Vogel V, Jamrozy D, Bentley SD, Spellerberg B. Molecular epidemiology of colonizing group B streptococcus strains from Egypt **The Global Conference on Group B Strep (ISSAD)**.
- 11-13th September 2016 **Shabayek S**, Shrade A, Gilg A, Ragnathan P, Ponnuraj K, Spellerberg B. The role of Zn for streptococcal Lmb proteins. **The 68th Annual Meeting of the German Society of Hygiene and Microbiology (DGHM), Ulm, Germany**.
- 11-14th October 2015 **Shabayek S**, Bauer R, Mauerer S, Spellerberg B. A streptococcal NRAMP homolog is crucial for the survival of *Streptococcus agalactiae* under low pH conditions. **EMBO | EMBL Symposium: New Approaches and Concepts in Microbiology, Heidelberg, Germany**.
- 27-30th September 2015 **Shabayek S**, Bauer R, Mauerer S, Spellerberg B. A streptococcal NRAMP homolog is crucial for the survival of *Streptococcus agalactiae* under low pH conditions. **The 67th Annual Meeting of the German Society of Hygiene and Microbiology (DGHM), Münster, Germany**.
- 23-25th April 2015 Sendi P, Furitsch M, Mauerer S, Florindo C, Kahl BC, **Shabayek S**, Berner R and Spellerberg B. Chromosomally and extrachromosomally mediated high-level gentamicin resistance in *Streptococcus agalactiae*. **Gemeinsame Jahrestagung DGPI/API Freiburg, Germany 23-25th April 2015**.

INVITED CONFERENCE TALKS

- 11-15th July 2022 Group B Streptococcal Colonization in African Countries: Prevalence, Capsular Serotypes, and Molecular Sequence Types. the international Conference on Group B Strep (ICGBS 2022).

INVITED REVIEW ARTICLES

- 2021 **Shabayek S**, Ferrieri P, Spellerberg B. Group B Streptococcal Colonization in African Countries: Prevalence, Capsular Serotypes, and Molecular Sequence Types. *Pathogens*. 2021 Dec 10;10(12):1606. doi: [10.3390/pathogens10121606](https://doi.org/10.3390/pathogens10121606). PMID: 34959562; PMCID: PMC8706430.
- 2018 **Shabayek S**, Spellerberg B. Group B Streptococcal Colonization, Molecular Characteristics, and Epidemiology. *Front Microbiol*. 2018 Mar 14;9:437. doi: [10.3389/fmicb.2018.00437](https://doi.org/10.3389/fmicb.2018.00437). PMID: 29593684; PMCID: PMC5861770.

INVITED BOOK CHAPTERS

- 2022 **Shabayek S**. (2022). *Streptococcus agalactiae* (Group B Streptococcus). In: de Filippis, I. (eds) *Molecular Typing in Bacterial Infections*, Volume I. Springer, Cham. https://doi.org/10.1007/978-3-030-74018-4_8
- 2017 **Shabayek S**, Spellerberg B. Making Fluorescent Streptococci and Enterococci for Live Imaging. *Methods Mol Biol*. 2017;1535:141-159. doi: [10.1007/978-1-4939-6673-8_9](https://doi.org/10.1007/978-1-4939-6673-8_9). PMID: 27914077.

PEER REVIEW ACTIVITY

- Reviewer for Scientific Reports
- Review Editor *Frontiers in Cellular and Infection Microbiology*
- Vaccine
- BMC Infectious Disease
- Journal of Tropical Medicine
- BioMed Research International (Hindawi).

CONFERENCES

28 th November 2022	The 4 th annual conference of graduate researchers in pharmaceutical sciences, Faculty of Pharmacy, Suez Canal University, Ismailia, Egypt: "New Frontiers in Pharmaceutical Research 2"
11-15 th July 2022	The international Conference on Group B Strep (ICGBS 2022).
26-27 th March 2022	The 9 th young researchers conference, Suez Canal university, Ismailia, Egypt: "Climate Change: Opportunities and Challenges"
3-5 th November 2021	The Global Conference on Group B Strep (ISSAD).
3-4 th April 2021	The 8 th young researchers conference, Suez Canal university, Ismailia, Egypt: "Future Shaping .. What is After the Pandemic"
28 th November 2020	The second conference of Institute of biotechnology for graduate studies and research affairs, Suez Canal university, Ismailia, Egypt: "Biotechnology Innovations and Covid-19 Pandemic"
17-18 th May 2020	The 7 th young researchers conference, Suez Canal university, Ismailia, Egypt: "Science and Technology Digitalization"
8-9 th December 2019	The second conference international conference of Faculty of Pharmacy, Suez Canal university, Ismailia, Egypt. ``Pharmaceuticals used in internal medicine``.
19 th October 2019	The first bioinformatics conference, Institute of biotechnology for graduate studies and research affairs, Suez Canal university, Ismailia, Egypt. " Diversity of bioinformatics careers".
7-8 th April 2019	The 6 th young researchers conference, Suez Canal university, Ismailia, Egypt. "Science and Technology Commercialization"
21-22 th February 2019	The 5 th annual conference of health insurance organization (Ismailia branch) in collaboration with tropical medicine department, Suez Canal university, Ismailia, Egypt.
26-27 th December 2018	The 1 st international conference on recent advances in molecular and cellular medicine, Center of excellence in molecular and cellular medicine, Faculty of Medicine, Suez Canal university, Ismailia, Egypt.
3 rd December 2018	The first annual conference for postgraduates, Suez Canal university, Ismailia, Egypt. "Pharmaceutical Science: Innovation and Development"
20 th November 2018	The 2 nd conference on clinical pharmacy of Faculty of Pharmacy, Suez Canal university, Ismailia, Egypt. Tolip Al forsan Hotel, Ismailia, Egypt "Clinical pharmacy between reality and expectations"
15-16 th November 2018	The 20 th annual meeting of preventive Cardiology and Rehabilitation W.G., Tolip Golden Plaza Hotel, Cairo, Egypt. "Cardio-Prevent 2018"
19-20 th April 2018	The 1 st annual Suez Canal University clinical oncology conference SCU-COC, Tolip Al forsan Hotel, Ismailia, Egypt
25-27 th November 2017	The first conference on clinical pharmacy, Faculty of Pharmacy, Suez Canal university, Ismailia, Egypt. ``Clinical pharmacy between reality and expectations``.
1-2 nd April 2017	The first international conference of pharmaceutical and medical sciences of the Faculty of Pharmacy, Suez Canal university, Ismailia, Egypt.
11-14 th October 2015	EMBO EMBL Symposium: New Approaches and Concepts in Microbiology, Heidelberg, Germany.
27-30 th September 2015	The 67 th Annual Meeting of the German Society of Hygiene and Microbiology (DGHM), Münster, Germany.

CONFERENCE ORGANIZATION

- 26-27th March 2022 The 9th young researchers conference, Suez Canal university, Ismailia, Egypt: "Climate Change: Opportunities and Challenges"
- 3-4th April 2021 The 8th young researchers conference, Suez Canal university, Ismailia, Egypt: "Future Shaping .. What is After the Pandemic"
- 17-18th May 2020 The 7th young researchers conference, Suez Canal university, Ismailia, Egypt: "Science and Technology Digitalization"
- 8-9th December 2019 The second conference international conference of Faculty of Pharmacy, Suez Canal university, Ismailia, Egypt. ``Pharmaceuticals used in internal medicine``.

PROJECTS

Research Projects:

- 2019 - present JUNO project on Group B Streptococcus: A Global Genomic Survey on *Streptococcus agalactiae*
- January 2009 – November 2011 Active member of the **Egyptian Spanish Research Project** between the Faculty of Pharmacy, Suez Canal University in Egypt and the Faculty of Pharmacy, University of Barcelona. The project is concerned in **using the Bacteriophage technology in treating waste water resources.**
- October 2005 – January 2006 Active member of a project under the title of :
" **A Biotechnological Approach to the Development of Bioactive Compounds from Marine Fungi**". The project was funded through "the USA joint " between Egypt and the United States.

Educational Projects:

- May 2005 – March 2008 Participation in the project of [**Education Enhancement of Pharmacy Courses (D-112-Q0)**], which was funded by Higher Education Enhancement Project Fund (**HEEPF**), as a member of the management team.
- July 2005 – October 2007 Participation in the project of [**Establishment of Internal Quality Assurance System in The Faculty of Pharmacy, Suez Canal University (SUE/3/05)**], which was funded by Higher Education Enhancement Project Fund (**QAAP**), as a member of the implementation team.

RESEARCH EXPERIENCE AND TECHNICAL SKILLS

- DNA and RNA extraction
- Polymerase chain reaction (PCR)
- PCR amplicon purification
- Gel extraction, Plasmid extraction
- Molecular cloning
- Gene expression Analysis
- Flow cytometry
- Cell culture
- Cell line handling
- Fluorescence microscopy
- Antimicrobial susceptibility testing
- Bacterial growth assays
- Metagenomics 16s and shotgun
- Whole genome sequencing
- Sanger sequencing
- Bioinformatic analysis
- R program
- QIIME1.9 and QIIME2
- Statistics using SPSS, PRISM, Microsoft Excel
- Enzyme linked Immunosorbent Assay (ELISA)
- Protein extraction
- Protein assay
- Quantitative real-time PCR
- Multiplex PCR

WORKSHOPS

- 30th May 2022 **Open Access for Egypt** offered by the Egyptian knowledge bank in collaboration with Springer Nature
- 25th May 2022 **Springer-Nature Open Access Agreement** offered by the Egyptian knowledge bank in collaboration with Springer Nature
- 5th January 2022 **Nature Academies workshop on Communicating Science to the Public** offered by the Egyptian knowledge bank in collaboration with Springer Nature
- 8th December 2020 **Nature Academies workshop on Clinical Research Methodology** offered by the Egyptian knowledge bank in collaboration with Springer Nature
- 7th December 2020 **Nature Academies workshop on Journal Editor 2** offered by the Egyptian knowledge bank in collaboration with Springer Nature
- 6th December 2020 **Nature Academies workshop on Journal Editor 1** offered by the Egyptian knowledge bank in collaboration with Springer Nature
- 30th November 2020 **Nature Academies workshop on Logical Manuscript Structure** offered by the Egyptian knowledge bank in collaboration with Springer Nature
- 29th November 2020 **Nature Academies workshop on Effective Post-submission Strategies** offered by the Egyptian knowledge bank in collaboration with Springer Nature
- 28th November 2020 **Nature Academies workshop on Being an Effective Reviewer** offered by the Egyptian knowledge bank in collaboration with Springer Nature
- 27th November 2020 **Nature Academies workshop on Systematic Reviews and Meta-analysis** offered by the Egyptian knowledge bank in collaboration with Springer Nature
- 26th November 2020 **Nature Academies workshop on Successful Pre-submission Strategies** offered by the Egyptian knowledge bank in collaboration with Springer Nature
- 25th November 2020 **Nature Academies workshop on Effective Academic Writing** offered by the Egyptian knowledge bank in collaboration with Springer Nature
- 26th October 2020 **Successful grant application with funding institutional – real examples and supporting tools** offered by the Egyptian knowledge bank in collaboration with Springer Nature
- 23-27th January 2020 **NGS-1 course: Transcriptome analysis.** Lecturer: Dr Tamer Mansour, genetics and quantitative biology, University of California, Davis, USA.
- 25-27th October 2019 **The international summer school on bioinformatics** offered by EG-CompBio Empowering computational biology and bioinformatics research in Egypt. Sponsored by DAAD
- 16th October 2019 **Nature Academies workshop on clinical research methodology** offered by the Egyptian knowledge bank. Lecturer: Dr Jeffrey Robens, Editorial Development Manager at Nature Research.
- 1-5th May 2019 **International intensive workshop on Bioinformatic analysis using R,** Egyptian Bioinformatics initiative, Lecturer: Dr. Mohamed Hamed, Head of OMICS analysis group, Rostock University, Rostock, Germany
- 21th April 2019 **Bioinformatics workshop on microbial diversity analysis,** Oncology diagnostic unit, Faculty of Medicine, Suez Canal university, Ismailia, Egypt.
- 7th April 2019 **Arab impact factor,** The 6th young researchers conference, Suez Canal university, Ismailia, Egypt. "Science and Technology Commercialization"
- 7th April 2019 **Web of Science and EndNote,** The 6th young researchers conference, Suez Canal university, Ismailia, Egypt. "Science and Technology Commercialization"
- 12th September 2018 **CellPress journals awareness workshop,** Faculty of Pharmacy, Suez Canal University, Ismailia, Egypt.
- 29 August 2018 **Writing for a grant,** Center of excellence in molecular and cellular medicine, Faculty of Medicine, Suez Canal university, Ismailia, Egypt.
- 15th November 2017 **Strategies for enhancing universities ranking and reputation,** Faculty of Pharmacy, Suez Canal University, Ismailia, Egypt.
- 13th November 2017 **Bibliometrics for international university rankings,** major hall, Suez Canal University, Ismailia, Egypt.

16 th October 2017	Research ethics and Methodology , Faculty of Pharmacy, Suez Canal University, Ismailia, Egypt.
16 th August 2017	How to avoid plagiarism , Faculty of Pharmacy, Suez Canal University, Ismailia, Egypt.
9 th August 2017	Administrative proficiencies for leaders , Faculty of Pharmacy, Suez Canal University, Ismailia, Egypt.
28 – 30 th November 2016	Biostatistics with R , Central lab, Faculty of Veterinary Medicine, Suez Canal University, Ismailia, Egypt.
2 -3 th November 2016	Basic graphics with R , Central lab, Faculty of Veterinary Medicine, Suez Canal University, Ismailia, Egypt.
1 st November 2016	Image J , Central lab, Faculty of Veterinary Medicine, Suez Canal University, Egypt.
30 th October 2016	Introduction to R , Central lab, Faculty of Veterinary Medicine, Suez Canal University, Ismailia, Egypt.
15-18 th July 2007	Molecular Diagnosis of Diseases , Institute of Graduate Studies and Research, Alexandria University, Alexandria, Egypt.
6 – 7 th December 2005	Genetic Diagnosis of Certain Disease by Real-time PCR . Molecular Engineering Center, Al-Azhar University, Cairo, Egypt.

ONLINE COURSES

14-19 th Febreuary 2022	Bioinformatics for biologists: an introduction to Linux, Bash scripting, and R , Wellcome Connecting Science, FutureLearn.
19 th August-16 th October 2019	16s rRNA microbiome intermediate bioinformatics training course . H3ABioNet
8-21 th February 2019	Bacterial genomes: from DNA to protein function using bioinformatics , wellcome genome campus advanced courses and scientific conferences, FutureLearn.
1-8 March 2019	Bacterial genomes: accessing and analyzing microbial genome data , wellcome genome campus advanced courses and scientific conferences, FutureLearn.

TEACHING ACTIVITIES

September 2022 - present	Undergraduate students at Faculty of Pharmacy, New Ismailia National University (University Requirement Courses).
September 2021- present	Undergraduate students at Faculty of Pharmacy, Suez Canal University (University Requirement Courses).
January 2017 - present	Undergraduate and post graduate students at Microbiology and Immunology Department, Faculty of Pharmacy, Suez Canal University.
February – December 2022	Postgraduate students, Postgraduate Diploma of Clinical Pharmacy, Faculty of Pharmacy, Suez Canal University
February 2021 - present	Postgraduate students, Professional Master (Pharmacy Quality Control), Faculty of Pharmacy, Suez Canal University.
September 2019 - present	Postgraduate students at Biotechnology Research Institute for Post Graduate Studies, Suez Canal University
February 2020 – June 2020	Undergraduate students at Microbiology and Immunology Department, Faculty of Pharmacy and Drug Manufacturing, Sinai University, Kantara Campus.
February 2017- June 2021	Postgraduate students, Professional Master (PharmD), Faculty of Pharmacy, Suez Canal University.

TEACHING EXPERIENCE

- Pathology
- General Microbiology and Immunology
- Pharmaceutical Microbiology and Antimicrobial Agents
- Medical Microbiology
- Public Health
- Computer Science (University Requirement)
- Parasitology and Virology
- Cell Biology
- Pathophysiology
- Pharmaceutical Biotechnology
- Sterilization
- Introduction to Science of Quality Control (University Requirement)
- Molecular Biology and Genetic Engineering
- Diagnostic Medical Microbiology
- Microbiology in Good Analytical Practice
- Hospital Microbiology
- Immunology

THESIS SUPERVISION

Supervision of 5 Master thesis at Microbiology and Immunology Department, Faculty of Pharmacy, Suez Canal University.

- Evaluation of the safety and Immunogenicity of novel chemically inactivated Rotavirus vaccine candidates for oral and parenteral vaccination
- Molecular epidemiology of colonizing group B streptococcus among pregnant women in Egypt
- Epidemiology of non-lactose fermenting E. coli in Egypt
- Determination of GyrA and ParC mutations and prevalence of plasmid mediated quinolone resistance genes in Escherichia coli and Klebsiella pneumoniae isolated from patients with urinary tract infection in Egypt
- Virulence factors of apathogenic Pseudomonas aeruginosa and correlation with antimicrobial resistance in Egyptian clinical isolates

Supervision of 6 PhD thesis at Microbiology and Immunology Department, Faculty of Pharmacy, Suez Canal University.

- Molecular characterization of microbiome in pregnant women
- Investigation of the bacterial gut microbiome of diverse Egyptian populations
- Study on the freshwater microbiome in the Suez Canal area using culture-dependent and metagenomic approaches
- Metagenomic analysis of bacterial communities associated to orointestinal axis in patients with Helicobacter pylori
- Metagenomic analysis of human gut microbiota in patients with colorectal cancer
- Prevalence and molecular characterization of multidrug resistant and multivirulent Streptococcus pyogenes isolated from Egyptian children.

Supervision of one Master thesis in collaboration with the Endodontics Department, Faculty of Pharmacy, Suez Canal University.

- Efficacy of four different rotary systems against biofilm growth inside root canals (In vitro study)

TRAINING COURSES

Training courses held by the Suez Canal University Education Development Center as a part of **FLDP Project [Faculty and Leadership Development Project]**

February 2023	Mobile Application
February 2023	Data Analysis using Microsoft Excel
January 2023	Strategies and methods of modern university learning
April 2021	Preparation of test items for the medical sector
December 2020	Course and Academic Program Design

July 2018	Responsible Behaviour in Scientific Research
July 2018	Usage of International Databases
July 2009	University Management
July 2009	International Publication
May 2006	Ethics and Manners of the Profession
May 2006	Communication Skills
June 2006	Research Methodology
16 June – 27 July 2006	[Effective Teaching, Teaching Technology, Micro Teaching]

LANGUAGES

- **ARABIC** Mother tongue

- **TEST OF PROFICIENCY IN ENGLISH (TOEFL)**

International TOEFL (IBT) Successfully passed with 98 iBT (equivalent to 597): Reading (23/30), Listening (27/30), Writing (28/30), Speaking (20/30).

- **GOETHE-ZERTIFIKAT A2**

START DEUTSCH 2 (A2) Successfully passed 96/100 (sehr gut): Hören (24.90/25), Lesen (23.24/25), Schreiben (23.24/25), Sprechen (24.90/25).