



## Curriculum Vitae

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**Degree:** PhD (Microbiology), Faculty of Science, Ain Shams University, Cairo, Egypt, 2017.  
M.Sc. (Microbiology), Faculty of Science, Ain Shams University, Cairo, Egypt, 2010.  
B.Sc. (Microbiology/Chemistry), Faculty of Science, Ain Shams University, Cairo, Egypt, 2001.  
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**Scopus Author ID:** 57204432225/ **h-index:** 9



### Professional Experience & Research Interests:

- Supervisor of graduation projects for students at the Faculty of Biotechnology, Modern Science and Arts (MSA University), Academic years 2017-2018, and 2018-2019.
- lecturer for the third and fourth-year students training in the summer at TBRI for 3 years (2017 – 2018- 2019).
- Instructor in Udemy (an online learning and teaching marketplace).
- Good background in techniques for gene isolation, characterization, molecular cloning, recombinant protein expression, and purification.
- Molecular diagnosis of HCV, HBV, HPV-genotypes, and EBV using PCR and quantitative Real-time PCR. Studying bioactivity of recombinant human interferons by measuring the expression level of MxA gene using quantitative RT- PCR
- DNA extraction and analysis from blood, urine, and tissues. DNA analysis using dot blot hybridization.
- *In-situ* hybridization (ISH).
- Good experience in tissue culture procedures such as propagation and culturing of attached cell lines (Vero cells, HepG2, and MCF7), subculturing, and cell freezing. Viruses' propagation and activation (Vesicular Stomatitis virus), virus titer determination using TCID<sub>50</sub>, and plaque assays. Cytotoxicity, anticancer activity, anti-inflammatory, and antiviral assay of different synthetic and natural compounds.



- Good experience in phage therapy, isolation of lytic phages, and phage characterization. The first researcher at TBRI to isolate and characterize bacteriophages against strains of the bacteria *Staphylococcus aureus* (MRSA)
- Mass spectrometry and HPLC (LC/MS/MS) for identification and characterization of therapeutic proteins.
- A member of the Center of Excellence in Bioinformatics at the TBRI, which works on research, development, and characterization of recombinant therapeutic proteins.
- Preclinical animal models (Rabbits).

#### A. Publications

1. Mohammed Ali Saber, **Safia Samir El-Naggar\***, Moatz Hassen Hassanein, and Ahmed Barakat Barakat. (2017): Role of MxA and Neutralizing antibodies in early response to Interferon treatment in Hepatitis C Egyptian Patients. *European Journal of Biomedical and Pharmaceutical Sciences*.4(2): 84-94.
2. Hala Badawi, Manal El Said, **Safia Samir**, Ahmed Ismail, Afkar Badawy, Ahmed Barakat. and Mohamed Saber (2018): Prevalence of Human Papillomavirus Genotypes among Egyptian Patients with Cancer Bladder. *Journal of International Pharmaceutical Research*. (45): 203-214.
3. H Badawi, M Abbass, O Hammam, M El Said, A Ismail, A Badawy, G Mostafa, **S Samir**, El-Dabaa E, and Saber M. (2019): Molecular and in-situ hybridization detection of Human Papillomavirus genotypes among Egyptian patients with bladder cancer. *International Journal of Pharmaceutical Research*. 11(3).
4. Shaaban R, El-Sayed WM, **Samir S** & El-Dabaa E (2019): Molecular and Biological Characterization of a Prepared Recombinant Human Interferon Alpha 2b Isoform. *Applied Biochemistry and Biotechnology*. 188 (1): 72-86.
5. Hend Okasha, Marwa Hassan, Tarek Aboushousha, & **Safia Samir** (2019). Effect of Interferon-Beta (IFN- $\beta$ ) on tumor suppressor and apoptotic markers in hepatocellular carcinoma cell line. *International Journal of Research in Pharmaceutical Sciences*, 10(4), 2936–2943. <https://doi.org/10.26452/ijrps.v10i4.1574>
6. Okasha, H., and **Samir, S.** (2020). Synthesis and molecular cloning of antimicrobial peptide chromogranin A N-46 gene using conventional PCR. *Gene Reports*, 18, 100571. <https://doi.org/10.1016/j.genrep.2019.100571>
7. Elnagar MM, **Samir S**, Shaker YM, Abdel-Shafi AA, Sharmoukh W, Abdel-Aziz MS, et al. Synthesis, characterization, and evaluation of biological activities of new 4'-substituted ruthenium (II) terpyridine complexes: Prospective anti-inflammatory properties. *Appl Organomet Chem*. 2021, 35(1), e6024 <http://doi.org/10.1002/aoc.6024>



8. Saber, M. A., Okasha, H., Khorshed, F., & **Samir, S.** (2021). A Novel Cell-based In vitro Assay for Antiviral Activity of Interferons  $\alpha$ ,  $\beta$ , and  $\gamma$  by qPCR of MxA Gene Expression. *Recent Patents on Biotechnology*, 15(1), 67–75. <https://doi.org/10.2174/1872208314666201112105053>
9. **Samir, S.\***: Bacteriophages as Therapeutic Agents: Alternatives to Antibiotics. *Recent Patents on Biotechnology*. 2021, 15(1), pp. 25–33. doi: 10.2174/1872208315666210121094311
10. Okasha, H., Nasr, S.M., **Samir, S.\***, 2021. Recombinant Expression of Cec-B Peptide in Escherichia coli with a Significant Anticancer Effect on Hepatocellular Carcinoma. *Curr. Pharm. Biotechnol.* <https://doi.org/10.2174/1389201022666210104121709>
11. El-Far, A., **Samir, S.\***, El-Gebaly, E., Taha, N.Y., Fahmy, E.M., Diab, T.M., El-Shenawy, A., 2021. Assessment of eugenol inhibitory effect on biofilm formation and biofilm gene expression in methicillin resistant Staphylococcus aureus clinical isolates in Egypt. *Infect. Genet. Evol.* <https://doi.org/10.1016/j.meegid.2021.104722>.
12. H. Okasha, **S. Samir**, and S. M. Nasr, “Bioorganic Chemistry Purified recombinant human Chromogranin A N46 peptide with remarkable anticancer effect on human colon cancer cells,” *Bioorganic Chemistry*, vol. 115, no. June, p. 105266, 2021, doi: 10.1016/j.bioorg.2021.105266.
13. El-Far A, **Samir S\***, El-Gebaly E, et al. High Rates of Aminoglycoside Methyltransferases Associated with Metallo-Beta-Lactamases in Multidrug-Resistant and Extensively Drug-Resistant Pseudomonas aeruginosa Clinical Isolates from a Tertiary Care Hospital in Egypt. *Infection and Drug Resistance*. 2021; 14:4849-4858. DOI: 10.2147/idr.s335582. PMID: 34848977; PMCID: PMC8613939.
14. El-Dabaa, E., Okasha, H., **Samir, S.**, Adel El-Kalamawy, H., Mohamed Nasr, S., & Ali Saber, M. (2022). Optimization of high expression and purification of recombinant streptokinase and in vitro Evaluation of its thrombolytic activity. *Arabian Journal of Chemistry*, 2022, 15(5), 103799. <https://doi.org/10.1016/J.ARABJC.2022.103799>
15. **Safia Samir**, Amira El-Far, Hend Okasha, Rania Mahdy, Fatima Samir, and Sami Nasr (2022): Isolation and characterization of lytic bacteriophages from sewage at an Egyptian tertiary care hospital against methicillin-resistant Staphylococcus aureus clinical isolates. *Saudi Journal of Biological Sciences*, 2022, 29(5), pp. 3097–3106. <https://doi.org/10.1016/j.sjbs.2022.03.019>
16. Omnia A. Mohamed, **Safia Samir\***, Hanan Omar, Ekrami A. Hassan and Eman Abdelazeem (2022): Lab-scale Preparation of Recombinant Human Insulin-like Growth Factor-1 in Escherichia coli and its Potential Safety on Normal Human Lung Cell Line.



- Recent Patents on Biotechnology. 2022; 16 (3): 266-280. <https://dx.doi.org/10.2174/1872208316666220412105822>
17. **S. Samir** *et al.*, “Rate of Epstein-Barr Virus in Gastric Adenocarcinoma in Egyptian Patients in View of the WHO Classification and Correlation with p16 Immunoreactivity,” *Open Access Maced. J. Med. Sci.*, vol. 10, no. A, pp. 1218–1225, 2022, doi: 10.3889/oamjms.2022.9700.
  18. S. Samir, “Basic Guidelines for Bacteriophages Isolation and Characterization,” *Recent Pat. Biotechnol.*, vol. 17, pp. 312–331, 2022, doi:10.2174/1872208317666221017094715.
  19. M. B. Salem, M. Elzallat, D. M. Mohammed, **S. Samir**, O. A. Hammam, and M. T. A. Abdel-Wareth, “Cornu aspersum mucin attenuates indomethacins-induced gastric ulcers in mice via alleviating oxidative stress and inflammation,” *Heliyon*, vol. 9, no. 5, p. e15677, 2023, doi: 10.1016/j.heliyon.2023.e15677.
  20. **Safia Samir**, Phages for treatment of Staphylococcus aureus infection, *Progress in Molecular Biology and Translational Science*, Academic Press, 2023, doi.org/10.1016/bs.pmbts.2023.03.027.
  21. Islam S. Marae, Raed M. Maklad, **Safia Samir**, Etify A. Bakhite, Walid Sharmoukh: Thieno[2,3-c]isoquinolines: A novel chemotype of antiproliferative agents inducing cellular apoptosis while targeting the G2/M phase and Tubulin. *Drug Development Research*. 31 March 2023 <https://doi.org/10.1002/ddr.22054>
  22. S. M. Nasr, **S. Samir**, and H. Okasha, “Interdisciplinary gene manipulation, molecular cloning, and recombinant expression of modified human growth hormone isoform-1 in E. coli system,” *Int. J. Biol. Macromol.*, vol. 257, no. P1, p. 128637, 2024, doi: 10.1016/j.ijbiomac.2023.128637
  23. **Samir, S.**, 2024. Molecular Machinery of the Triad Holin , Endolysin , and Spanin : Key Players Orchestrating Bacteriophage-Induced Cell Lysis and their Therapeutic Applications. *Protein Pept. Lett.* 1–12. <https://doi.org/10.2174/0109298665181166231212051621>.
  24. **Samir S.**, “Human DNA Mutations and their Impact on Genetic Disorders,” *Recent Pat. Biotechnol.*, vol. 18, no. 4, pp. 288–315, 2024, doi: 10.2174/0118722083255081231020055309.
  25. Maha B. Salem, Abdulrahman M. Saleh, Sayed H. Seif el-Din, **Samir S.**, Olfat A. Hammam, Naglaa M. El-Lakkany, Molecular docking, characterization, ADME/toxicity prediction, and anti-ulcer activity of new quercetin derivatives on indomethacin-induced gastric ulcer in mice, *Toxicology and Applied Pharmacology*, Volume 484, 2024, 116880, ISSN 0041-008X, <https://doi.org/10.1016/j.taap.2024.116880>.



26. Salem MB, El-Lakkany NM, Seif el-Din SH, Hammam OA, **Samir S.** Diosmin alleviates ulcerative colitis in mice by increasing Akkermansia muciniphila abundance, improving intestinal barrier function, and modulating the NF- $\kappa$ B and Nrf2 pathways. Heliyon [Internet]. 2024;10(6):e27527. Available from: <https://doi.org/10.1016/j.heliyon.2024.e27527>
27. **Samir, S.,** El-Ashry, M., Soliman, W., Hassan, M., 2024. Urinary biomarkers analysis as a diagnostic tool for early detection of pancreatic adenocarcinoma: Molecular quantification approach. Comput. Biol. Chem. 112, 108171. <https://doi.org/10.1016/j.compbiochem.2024.108171>
28. M. M. Elnagar, K. S. Abou-El-Sherbini, **S. Samir**, W. Sharmoukh, M. S. Abdel-Aziz, and Y. M. Shaker, "Synthesis, Characterization, and Biological Activity of New 4'-Functionalized Bis-Terpyridine Ruthenium(II) Complexes: Anti-Inflammatory Activity Advances," ChemMedChem, vol. 202400680, pp. 1–11, 2024, doi: 10.1002/cmcd.202400680.

## **B. Abstracts**

1. El-Far A, **Samir S**, El-Gebaly E, Omar M, Dahroug H, El-Shenawy A, Soliman NS, and Gamal D (2022): High Rates of Aminoglycoside Methyltransferases Associated with Metallo-Beta-Lactamases in Multidrug-Resistant and Extensively Drug-Resistant Pseudomonas aeruginosa Clinical Isolates from a Tertiary Care Hospital in Egypt. AFRICA HEALTH ExCon, June 5-7 2022, EGYPTIAN INTERNATIONAL EXHIBITION & CONVENTION CENTER (EIEC), Cairo-EGYPT.
2. El-Far, A., **Samir, S.**, El-Gebaly, E., Taha, N.Y., Fahmy, E.M., Diab, T.M., El-Shenawy, A., (2022): Assessment of eugenol inhibitory effect on biofilm formation and biofilm gene expression in methicillin resistant Staphylococcus aureus clinical isolates in Egypt. AFRICA HEALTH ExCon, June 5-7 2022, EGYPTIAN INTERNATIONAL EXHIBITION & CONVENTION CENTER (EIEC), Cairo-EGYPT.
3. **Safia Samir** (2021): Approaches to overcome Multidrug Resistance in Bacteria. 2<sup>nd</sup> International conference on Human Genetics and Genetic Disorders. March 22-23, 2021, Webinar (Brussels, Belgium).
4. Hend Okasha, Marwa Hassan, Tarek Aboushousha, and **Safia Samir** (2019). Effect of Interferon-Beta on the Expression of Tumor Suppression and Proliferation Genes in Human Liver Cancer Cell Line. United Conference of Hepatogastroenterology and Infectious Disease 2019 (UCHID-2019). 25-28 September 2019. Egypt
5. **Safia Samir**, Amira El-Far, Hend Okasha, Rania Mahdy, Fatima Samir and Sami Nasr. "Bacteriophages against Methicillin-resistant Staphylococcus aureus: New and Potential Alternate Therapy", 1-3 December 2022, TBRI.



6. **Safia Samir**, Hend Okasha, Tarek M. Diab, Amr Mostafa, Hesham A. Elmeligy, Amira Kamel, Heba Khalil” Epstein - Barr Virus and Gastric Cancer: A Distinct Molecular Subtype”, 1-3 December 2022, TBRI.
7. Sami Mohamed Nasr, **Safia Samir**, Hend Okasha Designing an optimized process for production of high yield purified rhGH using *E.coli* expression system”, 1-3 December 2022, TBRI.
8. Ehab ElDabaa, Hend Okasha, Sami Mohamed Nasr, **Safia Samir**, Omnia Ali Mohamed, Hadeer Adel El-Kalamawy, Mohamed Ali Saber” Process for high-level production of active recombinant streptokinase in *E.coli* using batch fermentation strategy”, 1-3 December 2022, TBRI.

### C. National Research projects

- ASRT Egypt ID 75 (2004-2008) "A new approach for detection of antibodies to human papilloma virus (HPV) 16 and 18 in cancer bladder cases by ELISA, using HPV 16 and 18 virus like particles produced by recombinant Baculovirus.
- STDF (ID 1454): Development of production and pegylation of interferon alpha, Principal investigator: Prof. Dr. Ehab El-Dabaa 2010 -2015
- STDF (1763): Impact of Interferon-alpha-2 alleles and anti-Interferon alpha-2 antibodies in HCV infected patients as predictive factors for response to Interferon therapy. Principal investigator: Prof. Dr. Mohammed Ali Saber. 2010-2017.
- STDF- Young Researchers Grant (STDF-YRG) ID 33430 Process Development for Industrial Production of Recombinant Human Growth Hormone Principal investigator: Dr. Sami Mohamed Nasr 2019-2022.
- STDF- Young Researchers Grant (STDF-YRG) ID 33390 Isolation and identification of lytic Bacteriophages against Methicillin Resistant *Staphylococcus aureus*. Principal investigator: Dr. Safia Samir El-Naggar 2019- 2022
- STDF – Center of excellence Centre of excellence in bioinformatics guided development and characterization research in recombinant pharmaceutical proteins. ID 31257. Principal investigator: Prof. Dr. Ehab El Dabaa Mohamed. 2019 - 2024.
- STDF – One health research and innovation grant (OHRIG): Efficacy and Safety of New Therapeutic Approaches for Combating Multi-drug Resistant Gram-Negative Bacteria in Urinary tract Infection. ID 48476. Principal investigator: Dr. Walaa Hamido. 2024 running.
- STDF – One health research and innovation grant (OHRIG): Therapeutic Assembled Recombinant Nanoformulated Bacteriophage Holin/Endolysin/Spanin Produced in *E. coli*



to Combat Multidrug Resistant ESKAPE pathogens. ID 48440. Principal investigator: Dr Safia Samir. 2024 running.

#### **D. Internal Research Project**

- Internal project (TBRI) 28 K/C1 – Recombinant Production of two synthetic peptides using prokaryotic expression system. Principal investigator: Dr/ Hend Okasha. Co-PI: Dr/Safia Samir, 2018.
- Internal Project (TBRI) 112C - Evaluation Of PD-L1 (22C3) And Microsatellite Instability (MSI) In Gastric Adenocarcinoma In The View Of The New WHO Molecular. Principal investigator: Ass. Prof: Dr/ Heba Khalil, Co-PI: Dr/ Safia Samir, 2019 - 2023.
- Internal Project (TBRI) 134 A – Potential Therapeutic Implication of Some Drugs (natural and synthetic) on Gut-liver-Brain axis disturbances in rats with hepatic encephalopathy. Principal investigator: Dr/Maha Salem, 8/2022 - 2024.
- Internal project (TBRI) 124 C – Studying the Immunomodulatory and Anti-tumor effect of in vitro polarized bone marrow-derived macrophage: A potential cytotherapy for colon cancer induced experimental model. Principal investigator: Dr/Sara Maher Hassan, 10/2023 running.

#### **E. Attended Conferences**

1. The 2<sup>nd</sup> Arab conference of infection control" Antimicrobial Resistance: A call to combat" under the participation in " The national campaign for the appropriate use of Antimicrobials" of the Egyptian Society of infection control, TBRI, Cairo, 23-25 May 2005.
2. TBRI symposium on "Liver diseases and cancer bladder" as a contribution to the German Egyptian Year of Science and Technology, 21<sup>st</sup> October 2007.
3. 2<sup>nd</sup> International workshop "Industrial Biotechnology", Cairo University, 2011.
4. The ninth annual scientific conference on Hepatology, TBRI and Beaujon Hospital (France), 5<sup>th</sup> March, 2017, Cairo.
5. The fifth annual conference of Ain Shams Tropical Medicine Department, 21 -23 November 2017. Triumph hotel, Heliopolis, Cairo, Egypt.
6. The tenth Annual Scientific Meeting in Hepatogastroenterology Between TBRI and Beaujon Hospital (France), 6<sup>th</sup> of May 2018, Ramses Hilton.
7. The 10<sup>th</sup> annual conference of National Hepatology and Tropical Medicine Research Institute (NHTMRI), 24 – 27 September 2018. Grand Nile Tower, Cairo.



8. The United Conference of Hepatogastroenterology and Infectious Disease 2019 (UCHID-2019). 25-28 September 2019, Grand Nile Tower, Cairo.
9. The annual Conference 2021 under the theme when researchers met clinicians 2<sup>nd</sup> -4<sup>th</sup> December 2021, TBRI.
10. Global Forum of Higher Education and Scientific Research (GFHS)-2021- 8-12-2021 to 10-12-2021, AlMasa Hotel, Cairo.
11. The 14<sup>th</sup> annual conference of national hepatology & tropical medicine research institute (NHTMRI), JW Marriot Hotel, 20<sup>th</sup> -21<sup>th</sup> October 2022
12. The Annual conference 2022, under the theme ‘‘Emerging Technology in Health and Environment, 1st – 3rd December 2022, TBRI.
13. 15 Breast-Gynaecological and immunology international cancer conference, JW Marriot Hotel Cairo-Egypt, 19-20 January 2023
14. The 11<sup>th</sup> Annual Ain Shams University International conference, Triumph luxury hotel, Cairo, Egypt, 10-11<sup>th</sup> May 2023.
15. The 1st scientific meeting of the immunology and therapeutic evaluation division, TBRI under the theme of Innovative research from bench to market, TBRI, 28<sup>th</sup> of May 2023.
16. The 1<sup>st</sup> international conference on Cancer ‘‘Treatment & Diagnosis’’, National Research Center, Cairo, Egypt, 15<sup>th</sup> – 16<sup>th</sup> of October 2023.
17. The annual conference at Theodor Bilharz Research Institute 2024, ‘‘Innovative Solutions for Emerging Health Problems’’, on 27 – 29 February 2024.
18. TBRI, 4th symposium of the scientific program of climate change (SPCC) under the theme of: ‘‘Climate Change Impacts on Environmental-Related Health: Adaptation and Mitigation’’ Monday 21st October 2024

#### **F. Attended Workshops**

- Participation in the module entitled "Proposal writing for post-Docs" within the DAAD Kairo Akademie on 28<sup>th</sup> September 2017.
- Participation in the module entitled "interviews-methods for data collection" within the DAAD Kairo Akademie on 30<sup>th</sup> October 2017.
- Participation in the module entitled "Research Processes: Overview and Principles" within the DAAD Kairo Akademie on 31<sup>st</sup> October 2017.





- Attended the workshop entitled " Steps for successfully submitting your scientific article" on March 4<sup>th</sup>, 2018, National Research Center.
- Attended the workshop entitled " Systematic Review and Meta-analysis" on March 14<sup>th</sup> 2018, TBRI.
- Participation in the module entitled "Presentation skills" within the DAAD Kairo Akademie on 13<sup>th</sup> September 2018.
- Attended the workshop of SCIEX-AGITECH SEMINAR about mass spectrometers on Monday 24<sup>th</sup> September/ 2018.
- Attended the workshop on Quality in Research, TBRI, 10<sup>th</sup> October 2018.
- Attended the workshop of Research Funding and Collaboration, TBRI, 11<sup>th</sup> October 2018.
- Attended the workshop in the symposium entitled Multi-disciplinary Approaches for the Chemistry of Amino Acids and Peptides and their Medicinal Applications, National Research Center. 24<sup>th</sup> of October 2018.
- Attended the workshop on Medical Malacology Snails as neurobiological models, bioindicators, and intermediate hosts, on the 4<sup>th</sup> of November 2018.
- Attended the symposium of the Microbiology Department at TBRI in collaboration with the University of Basque, Spain, "Challenge of Carbapenem Resistance in Gram-Negative Bacteria", TBRI, 13<sup>th</sup> of January 2019.
- Attended the symposium between the Immunology and Therapeutic Evaluation Department, TBRI, and the University of Basque, Spain, "Hepatogastroenterology Diseases: Etiology, Pharmacological Hallmarks, and Therapeutics Targets", TBRI, 15<sup>th</sup> of January 2019.
- Attended the workshop " Enhance your research using NANO research solution" session at TBRI, 14 Feb 2019.
- Attended the annual meeting of the clinical laboratory research department "Hot Topics in Laboratory Medicine", 5<sup>th</sup> March 2019, TBRI.
- Attended Scientific Meeting "Trends in the diagnosis, control, and prevention of Tropical Diseases" 14<sup>th</sup> of April 2019 Theodor Bilharz Research Institute/National Institute of Parasitic Diseases.



- Attended the workshop " How to publish in the Top 20 High Impact Journals", on the 3<sup>rd</sup> of December 2019, Theodor Bilharz Research Institute.
- Attended the workshop about the awareness program and definition of hospital registration requirements, 8-10 August 2021 at TBRI.
- Attended the workshop about Advanced Scientific Research and Medical Malacology, TBRI, 1 March 2022.
- Attended the workshop about Digital PCR, TBRI, 2022.
- Attended the workshop about Biobanking for better health and research, TBRI, July 5<sup>th</sup>, 2022.
- Attended the 2<sup>nd</sup> symposium of the scientific program of climate change (SPCC) "Climate change impacts on health and ecosystem: Pave the way for COP 27", Monday, 17<sup>th</sup> October 2022, TBRI.
- Attended the Best Practice Conducting Internal Audit Workshop, 2<sup>nd</sup> to 3<sup>rd</sup> January 2023, 8 training hours. Reference Laboratory of Egyptian University Hospitals In collaboration with WHO – Egypt.
- Attended the 2<sup>nd</sup> annual Egypt-Japan Scientific Meeting, TBRI, Monday 20<sup>th</sup> of November 2023.
- Attended the 2<sup>nd</sup> Scientific meeting entitled: Biobank: The gate for the future of personalized medicine, on December 6<sup>th</sup>, 2023.
- Attended the workshop: كتابة المقترحات البحثية و التعريف بالجهات المانحة, TBRI, 29 October 2024.
- Attended the workshop titled Nano radio-pharmaceuticals approach for tumor theranosis, TBRI, 12 December 2024

#### **G. Attended Online Conferences and Webinars**

1. TBRI 2020 Virtual Annual Conference (December 2020), Theodor Bilharz Research Institute  
Cancer Research Webinar 5  
Recent Research in Molecular Biology and Tissue Engineering Webinar 11  
Liver Diseases in Special Situations Webinar 10  
Recent Trends in Nanotechnology and Drug Discovery Webinar 9  
COVID 19 second wave challenges Webinar 1



2. A one-hour webinar and G&A session entitled “Rapid kinetics for fragments”, February 2<sup>nd</sup>, 2021.
3. Nature Research Academies workshop:” Successful pre-submission Strategies”. February 2021.
4. Attended a one-hour webinar entitled “Increasing CRISPR knockout and screening efficiency with predesigned synthetic guide RNAs”. 12<sup>th</sup> March 2021.
5. Attended a module entitled ‘How to peer review a review article’, on Thursday 18 March 2021.
6. Attended a webinar about Bacterial Mitigation Strategies, the FDA Guidance and Implications for Blood Centers and Transfusion Services, 7 July 2021.
7. 13<sup>th</sup> HOPE meeting with Nobel Laureates, Japan Society for the Promotion of Science HOPE ID: EG02, 7-11 March 2022.
8. Attended an online workshop about ‘Conducting internal audit’. 2-3 January 2023.
9. Attended the joint webinar between Theodor Bilharz Research Institute WHO CC and the National Institute of Parasitic Diseases WHO CC entitled “Schistosomiasis control in Egypt and China: Where we stand?”, 23 February 2023.
10. Attended the course entitled Statistics for Clinicians, approved by the Egyptian Association of Continuing Medical Education Development, 26, 27, 29 & 31 May, 1, 3, 5, 7, 8, 10, 12 & 13 June 2023.
11. Attended the: Research beyond Academia: strategies for real-world impact, Taylor and Francis Group, Aug 10, 2023.

#### **H. Attended Courses**

1. Attended the postgraduate course on “Updates in Hepatology” conducted by Fullbright U.S. scholar to Egypt, from February 12 to March 8, 2023.
2. Attended the online course “Statistics for clinicians”, Thoth for Research Upgrading Support and Training (TRUST), 26<sup>th</sup> of May – 13<sup>th</sup> of June 2023.
3. Attended the training course by the Thermo application support team: Biopharma analysis by UHPLC and high-resolution Orbitrap<sup>TM</sup> mass spectrometry, 9 -13 July 2023, Instructor: Ulrik H. Mistarz (Biopharma Application Expert).



4. Attended the course entitled 'Requirements of ISO/IEC 17025-2017, held on 22-25-26 February 2024 at TBRI.

### **I. Oral presentations**

1. Attended the 2<sup>nd</sup> international conference on Human Genetics and Genetics disorders, March 22, 2021, in the webinar as a speaker: certificate of significance of recognition (PULSUS group) for phenomenal and worthy presentation on (Approaches to overcoming multidrug resistance in bacteria), Brussels, Belgium.
2. Attended the 2<sup>nd</sup> workshop: Biotechnology in Production of Recombinant Biopharmaceutical Proteins as a speaker, 31<sup>st</sup> August 2022, TBRI.
3. Attended the workshop entitled 'Real-Time PCR for Diagnosis and Expression' as an instructor, 29 – 30 November 2022, at the Biochemistry & Molecular Biology Department, TBRI.
4. Attended the 3<sup>rd</sup> workshop: Biotechnology in Production of Recombinant Biopharmaceutical Proteins as a speaker in a lecture entitled Bioanalytical and MS characterization of recombinant biopharmaceutical proteins, 12<sup>th</sup> September 2023, TBRI.
5. Attended the 1<sup>st</sup> international conference on Cancer 'Treatment & Diagnosis', National Research Center, Cairo, Egypt, 15<sup>th</sup> – 16<sup>th</sup> of October 2023.
6. Attended and contributed as a speaker at the 2<sup>nd</sup> international conference on cancer 'Treatment and Diagnosis'—National Research Centre, 22<sup>nd</sup> -23<sup>rd</sup> October 2024.

### **J. Supervision of theses**

1. Supervision of MSc thesis in Biochemistry entitled "Evaluation of the antimicrobial activities of shepherin II peptide produced by recombinant DNA technology". Student's name: Azza Abdelfattah. Starting from 23-9-2021.
2. Supervision of the PhD thesis in Biochemistry entitled "Cloning and expression of human insulin like growth factor-1 (IGF-1) in E. coli". Student's name: Assistant researcher Omnia Ali. Starting from 29-7-2021.
3. Supervision of the MSc thesis in Microbiology entitled 'Evaluation of Kaempferol Effect on Biofilms of *Klebsiella pneumoniae* isolates. Student's name: Radwa Hamdy. Starting from 25-5-2022.
4. Supervision of the MSc thesis in Zoology entitled 'Assessment of Coumestrol Effect on Apoptosis and Proliferation of Human Liver Cancer Cells. Student's name: Hoda Abdelnaby. Starting from 29-10-2023.



5. Supervision of the MSc thesis in Zoology entitled “ Exploring the Antiproliferative Potential of Eugenol: Cellular and Molecular Studies on HepG2 Cells. Student’s name: Lydia Zekry Gendy. Starting from 1-8-2024.

**K. Reviewing papers**

1. World Journal of Surgical Oncology.
2. World Journal of Microbiology and Biotechnology.
3. Egyptian Journal of Chemistry.
4. Journal of Pharmaceutical Research International.
5. Open Access Macedonian Journal of Medical Sciences.
6. Oxidative Medicine and Cellular Longevity.
7. BMC Microbiology.
8. Archives of Microbiology.
9. Biotechnology and Bioengineering.
10. Scientific Reports.
11. Frontiers in Microbiology.
12. Virology Journal.
13. Canadian Journal of Infectious Diseases and Medical Microbiology.
14. Microbes and Infectious Diseases.
15. Cardiovascular & Hematological Agents in Medicinal Chemistry.
16. Current Reviews in Clinical and Experimental Pharmacology.
17. Pure and Applied Microbiology.
18. Protein & Peptide Letters.
19. Enzyme and Microbial Technology.



20. Computational Biology and Chemistry.
21. Toxicology Reports.
22. Recent patents on Biotechnology.
23. Current Topics in Medicinal Chemistry.
24. International Immunopharmacology.
25. Current Gene Therapy.

#### **L. Editorial tasks**

Editorial Board Member – International Conference on Oncology and Cancer Research.  
ID: 6059, [www.pencis.com](http://www.pencis.com).

#### **M. Skills**

##### **1. Lecturer and Trainer:**

- Trained in the Course Titled: Methods and Techniques in Biotechnology ‘Hands-on’. From 7-8-2017 to 12-9-2017.
- Trained in the Course Titled: Methods and Techniques in Biotechnology ‘Hands-on’. From 8-2018 to 9-2018.
- Trained in the Course Titled: Recombinant Protein Preparation ‘Hands-on’. From 8-2018 to 8-2018.
- Trained in the Course Titled: Methods and Techniques in Biotechnology "Hands-on". From 7-2019 to 9-2019.
- Hands-on Biochemistry and Molecular Biology Department workshop (Real-time PCR for diagnosis and expression), 29-30 November 2022.

##### **2. Examiner:**

- Examined graduation projects of students at October University for Modern Science and Arts (MSA University) Academic year 2017-2018.
- Oral examination of students at Badr University in Cairo (BUC), Faculty of Biotechnology, Academic year 2023 – 2024.



**N. Prizes**

She ranked tenth in published research included in the Scientific Research Evaluation Program (2021) presented by the Theodor Bilharz Research Institute.

**O. Activities**

1. Member of the Quality Control Unit at Theodor Bilharz Institute Hospital from 30/12/2018 until 5/6/2024.
2. Member of the Central Laboratory at the Theodor Bilharz Institute from 3/9/2022 to 12/18/2023.
3. Member of the Institute's Scientific and Cultural Relations Committee from 16/2/2023 until 16/5/2023.