



**FACULTY OF
BIOTECHNOLOGY**

**ACHIEVEMENTS
YEAR BOOK
2021 / 2022**



Contents

00 Deans Welcome

01 Extra Curricular Activities

02 Research Publications

03 Students and Staff Awards

04 Academic Events

05 Staff Achievements and

PG-Certificates

06 Collaborative Agreements

07 Alumni Activities

Dean's welcome:



**Prof. Ayman
Diab**

Dean of the
faculty of
Biotechnology

Welcome to Faculty of Biotechnology: With the ever-changing world we live in, over the past decade, biotechnology has advanced by altering the specifications desired to comply with society's needs. Let me give you a comprehensive explanation at its simplest, biotechnology is a technology based on biology; which includes harnessing cellular and biomolecular processes to develop technologies and products that help improve lives and overall health. With depleting resources, the food and agricultural industries will need greater levels of food security to overcome global challenges of malnutrition, Biotechnology is a powerful accessible tool of nature that can accommodate this need. Recent advances in biotechnology are helping with society's most pressing challenges. Now why choose biotechnology at MSA? You might ask; the faculty of biotechnology at MSA university is the first faculty to be accredited from both; Greenwich university in UK and National Authority for Quality Assurance and Accreditation of Education in Egypt. Additionally, the university and the faculty staff are dedicated to providing top notch education that infuses strong basic knowledge, sound practice in biotechnology and applied biology for the well-being of society. Additionally we offer diverse syllabi that nurture creative thinking and prepare students for productive and rewarding careers. Not only but also, the faculty of biotechnology have various collaborative agreements with different foundations and laboratories to enhance the educational process for the students and alumni Our undergraduate programme provides a bachelor of science (BS), an integrated program designed for training high quality scientists and future leaders in biotechnology. Our biotechnology undergraduates receive high quality education from organized lectures and laboratory courses. Our students have the opportunity to be involved in many aspects of campus life, training sessions at a national scale and abroad, Honors programmes for a master's scholarship, extracurricular activities, as well as participating in the faculty's research.

The Faculty of Biotechnology, October University for Modern Sciences and Arts, received an official accreditation from the National Authority for Quality Assurance and Accreditation of Education of Egypt, to become the first faculty in the biotechnology field to receive both an Egyptian & a British accreditation.





Extra-Curricular Activities

Field Trips

Academic field trips are the enjoyable element of education. Field trips enhance significantly the content introduced in a course through conveying certain elements that cannot be illustrated with a broad spectrum in classrooms. There are several courses in the Faculty of Biotechnology that include going on field trips. One of the main courses that involve various field trips as a mandatory part of the course is the "**Industrial Projects**", which promotes a spectrum of benefits to the students. Other courses that includes field trips as an extracurricular activity is "**Gene Therapy and Stem Cell Courses**".



Field Trips

Total no. of field trips
(5)

Students regularly engage in various field trips as part of different courses with the aim of examining multiple industries and institutions that may advance the students' learning process. For instance, the **industrial projects** course is one of the most condense and demanding courses for the spring semester, where students get to have weekly field visits to various industrial enterprises and research institutes as well as occasional encounters with guest speakers with vast experience in the field of biotechnology.

The purpose of the course is to acquaint students with the miscellaneous industrial processes and organizations in efforts of deriving inspirations for a biotechnological venture aimed at solving industrial challenges or improving pre-existing commercial products.

“Field Trip to Zenin Waste Water Treatment”

To contribute to an interactive learning environment, and enhance the overall learning experience. The faculty of biotechnology organized a field trip as part of the “**Industrial Projects Course**”, where **50** students and **2** teaching assistants visited the **Zenin Waste Water Treatment**.



“Field Trip to Imbaba Water Treatment”

To contribute to an interactive learning environment, and enhance the overall learning experience. The faculty of biotechnology organized a field trip as part of the “**Industrial Projects Course**”, where **50** students and **2** teaching assistants visited the **Imbaba Water Treatment**.



“Field Trip to Algae Unit at the National Research Centre”

To contribute to an interactive learning environment, and enhance the overall learning experience. The faculty of biotechnology organized a field trip as part of the “**Industrial Projects Course**”, where **30** students and **2** teaching assistants visited the **Algae Unit at the National Research Centre**.



“Field Trip to Nawah Scientific Research Centre”

To contribute to an interactive learning environment, and enhance the overall learning experience. The faculty of biotechnology organized a field trip as part of the “**Gene Therapy Course**”, a total of **28** students and **1** assisting staff were engaged in a visit to the **Nawah Scientific Research Centre**.



“Field Trip to Cell Safe Bank”

To contribute to an interactive learning environment, and enhance the overall learning experience. The faculty of biotechnology organized a field trip as part of **“Stem Cell Course”**, a total of **30** students and **1** assisting staff were engaged in a visit to the **Cell Safe Bank**.



Clubs

Faculty of Biotechnology encourages students to actively engage in several various co-curricular clubs and activities on campus. Student activities are generally designed to allow students to get more involved and offer them opportunities in leadership, social responsibility, citizenship, volunteerism, and student employment.



Total no. of Clubs

(12)

Running this year **(2)**

Book Club Session (Fall)

The Biotechnology book club hosted a relaunch event that took place on Monday, 15th of November at the Student Services Building (SSB) to recruit new members. The event was organized by **L.A. Zahra Hussein, L.A. Fouad Ashry & L.A. Nashwa Hamido**



Journal Club (Fall)

The Faculty of Biotechnology is always keen to qualify its students and make them able to compete globally. The Journal Club prepared a workshop on the 15th of December which was presented by **Mrs. Dina El-Zohiry**, who received a master's scholarship from the University of "New Haven in the United States" and one of the winners of the **Famelab competition**, in which she presented ways to obtain scholarships abroad and the required skills to catch those scholarships.

This workshop was attended by **40 students** and was met by a great interaction by the students where they expressed their admiration for the content presented. The event was successfully organized by **Prof. Amr Ageez, L.A. Yara Ahmed, L.A. Dalia Hesham, L.A. Youssra Rashwan, L.A. Gehad Tarek.**



Journal Club (Spring)

The Biotechnology Journal club supports the development of Sustainable, Green, and Clean synthesis of important chemicals. The club demonstrated a successful journey in publishing a recent paper under the title of "Selective synthesis of alpha monoglycerides by a clean method: Techno-economic and environmental assessment".



Additionally, this paper is a successful cooperation between the Faculty of Biotechnology and the Faculty of Engineering. **70 students** attended the Biotechnology Journal club as well as **Dr. Reham Mohsen, L.A. Hoda Allam, T.A.Omnia Bassam** from the Faculty of Biotechnology, and Dr.Ahmed Moustafa from the Faculty of Engineering who demonstrated this successful project. The event was organized by **Dr. Amr Ageez, L.A. Yara Ahmed, L.A. Gehad Tarek, L.A. Dalia Hesham. And L.A. Yousra Rashwan.**



Guest Speakers

The faculty of Biotechnology regularly runs guest lectures featuring high-profile individuals from the professional and business world. Informative, stimulating and even controversial, these talks open students eyes to what's going on across various sectors, support professional development and help build network of contacts.

Guest speakers cover a wide range of subjects and are open to students, alumni and professionals in the region.



Number of Guest speakers

(10)

The Faculty of Biotechnology hosted a session about “New generation in Obesity Control” provided by **Dr. Hany Abo El Naga**, PhD in clinical nutrition, University of Miami, Florida, USA. Who mainly focused on new trends in obesity management and the shift towards healthier lifestyle. It served towards inspiring students into developing new ideas for projects pertaining to nutrition and molecular techniques, with the added benefit of inspiring a proactive approach towards healthy lifestyles for younger individuals to evade diabetes and hypertension this session was a part of the **Industrial Projects Course**.



The Faculty of Biotechnology hosted a session about **“The challenges of superbugs and nano-based tools”** provided by **Prof. Mohamed Elhadidy** who Enlightened the different challenges of antimicrobial resistance using throughput sequencing and nanotechnology tools as a part of the **Industrial Projects Course**.



The Faculty of Biotechnology hosted a session about **“Unraveling the hidden biotechnological potential of marine microbial communities ”**provided by **Dr. Rehab Abdallah** as a part of the **Industrial Projects Course**.

The session was a new perspective on one of the most popular topics marine biotechnology, bioplastics and their applications.



The Faculty of Biotechnology hosted a session about **“Hydrogels and Green Nano-Biotechnology”** provided by **Dr. Shaimaa Saeed** as a part of the **Industrial Projects Course**.



The Faculty of Biotechnology hosted a session about **“DIY-Bio and open source communities”** provided by **Dr. Ahmed Gomaa** as a part of the **Industrial Projects Course**. This session covered the different aspects of artificial intelligence focusing on DIY- BIO and open source communities, for the development of prototypes.



The Faculty of Biotechnology hosted a session about **“Biotechnology applications in cosmetics”** provided by **Dr. Fayez Fouda** as a part of the **Industrial Projects Course**. The sessions provided the students with new perspectives on the applications of biotechnology in cosmetics.



The Faculty of Biotechnology hosted a session about **“Genetic engineering and Microalgal Biotechnology”** provided by **Prof. Ashraf Bakry** as a part of the **Industrial Projects Course**. The sessions provided the students with new genetic perspectives of micro algae.



The Faculty of Biotechnology hosted a session about **“How to develop a research question”** provided by **Dr. Ashraf Bakkar** as a part of the **Industrial Projects Course**.



The Faculty of Biotechnology hosted a session about “**The 12 steps of Budgeting’** and aimed at introducing students on the foundations of project management in terms of preparing estimates, Gantt charts and budgets” by **Dr. Karim Farag** as a part of the **Industrial Projects Course**. The session were well received by the students, and should effectively contribute to enhancing the feasibility of their research proposals.



The Faculty of Biotechnology hosted a session about **“Research Process and Experimental Design”** provided by **Dr. Hossam Taha** as a part of the **Industrial Projects Course**.





Research Publications

Research Publications

The faculty of Biotechnology is renowned its keenness towards being innovators. The crowning Jewel of the faculty '**Graduation Projects**', is a unique combination that demonstrates phenomenal success in producing young innovators and future scientists. The best demonstration of its success would be the exponential growth of Undergraduate Student publications, which develop projects that are accepted in international journals.



Total no. of publications year

**Fall 2021-
Spring 2022**

(50) Publications

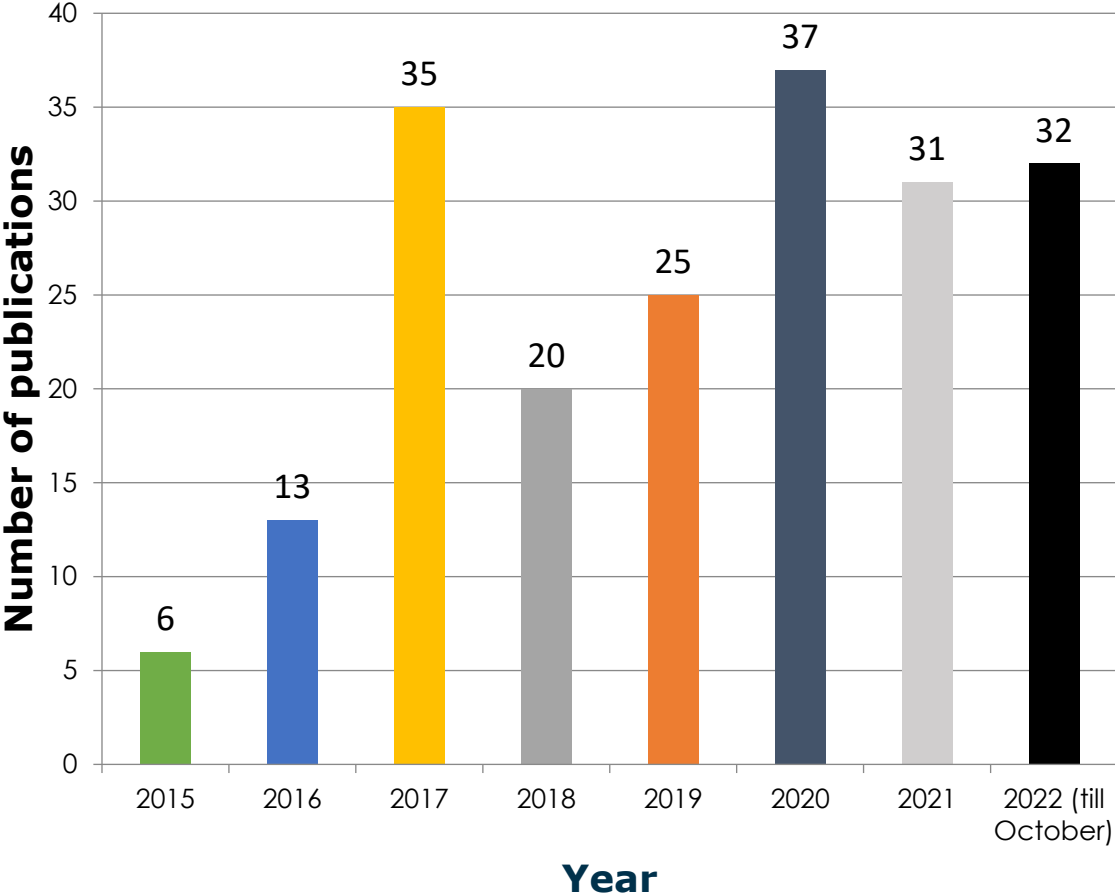
Fall 2021 (18)

- Staff only **(9)**
- Student only **(0)**
- Combined **(9)**
(student+staff)

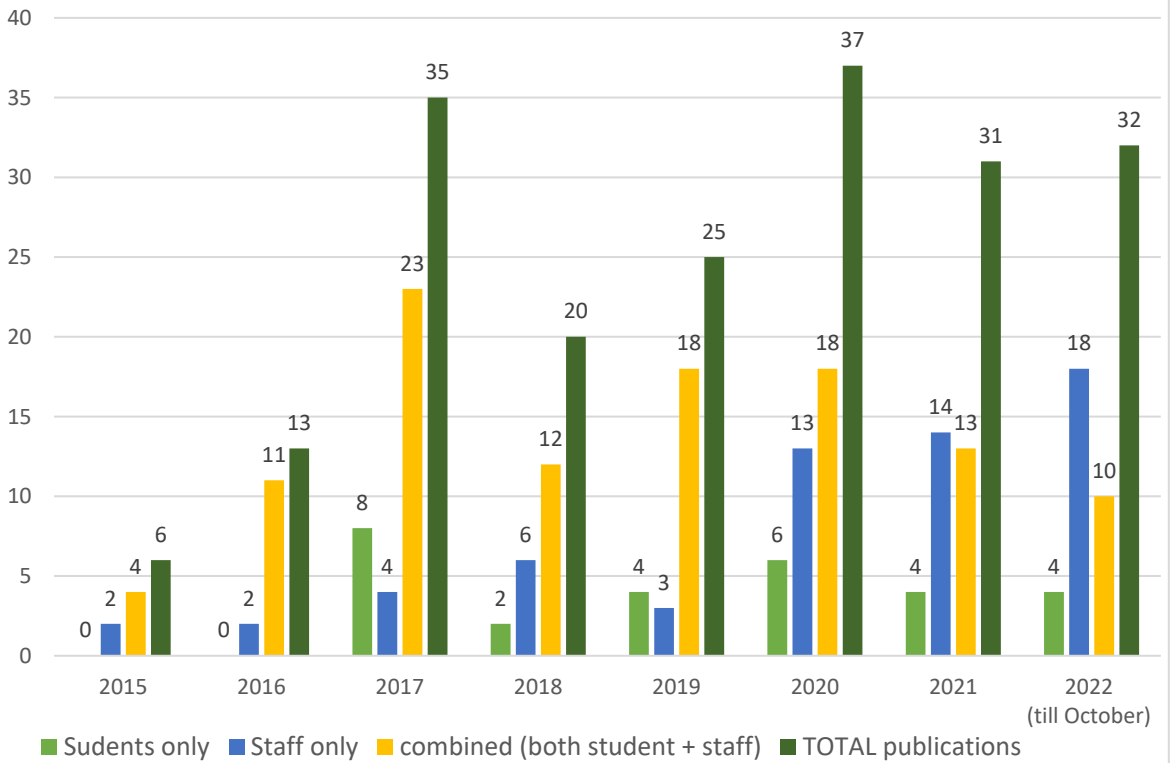
Spring 2022 (32)

- Staff only **(18)**
- Student only **(4)**
- Combined **(10)**
(student+staff)

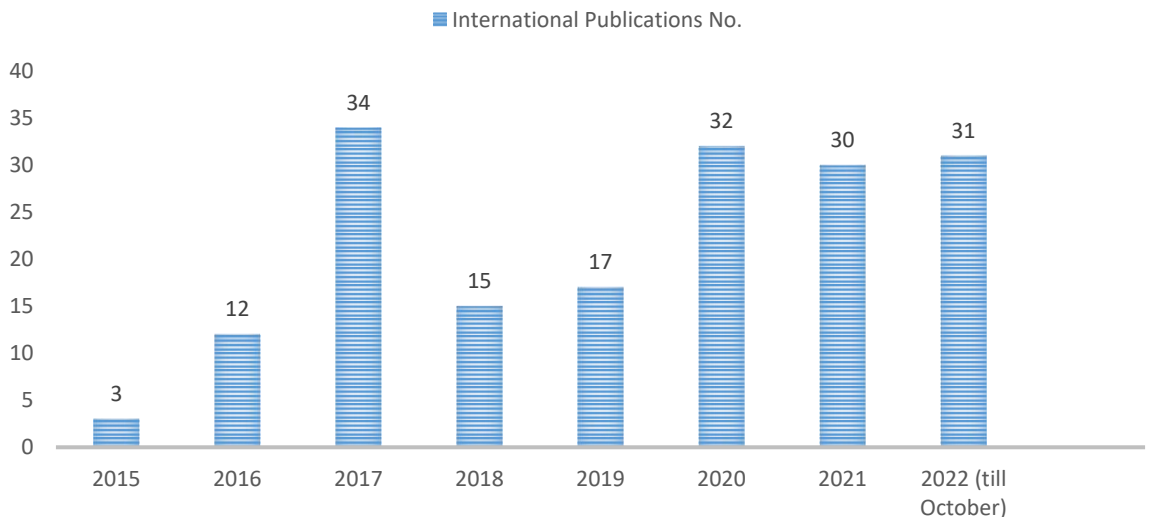
Student & Staff Publications Per Year



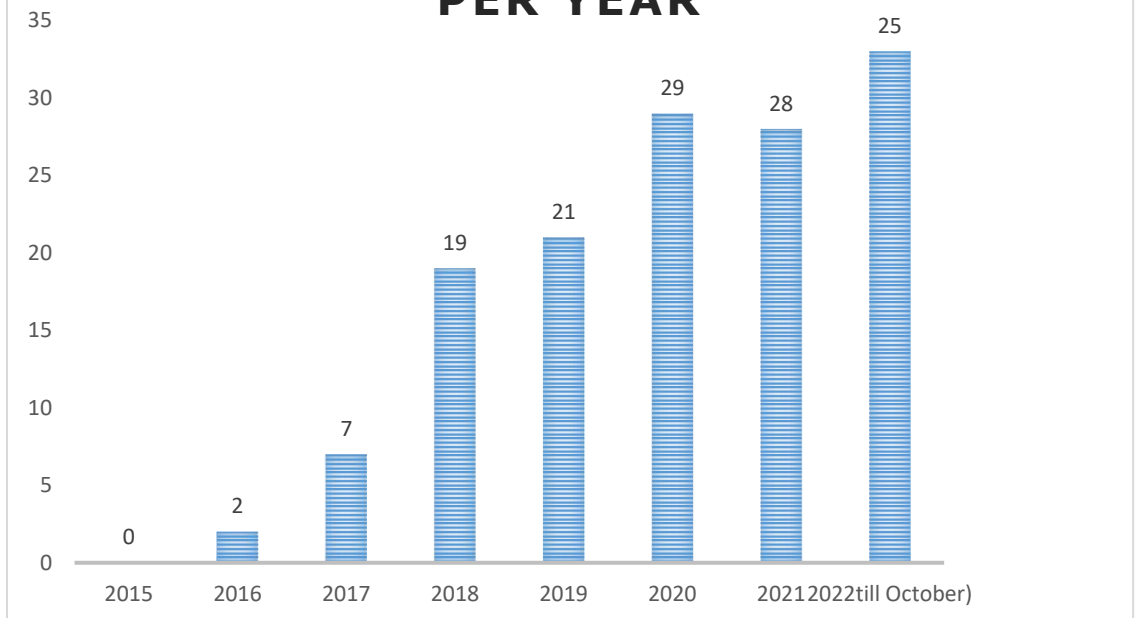
Staff and Students Publications



INTERNATIONAL PUBLICATIONS NO. PER YEAR

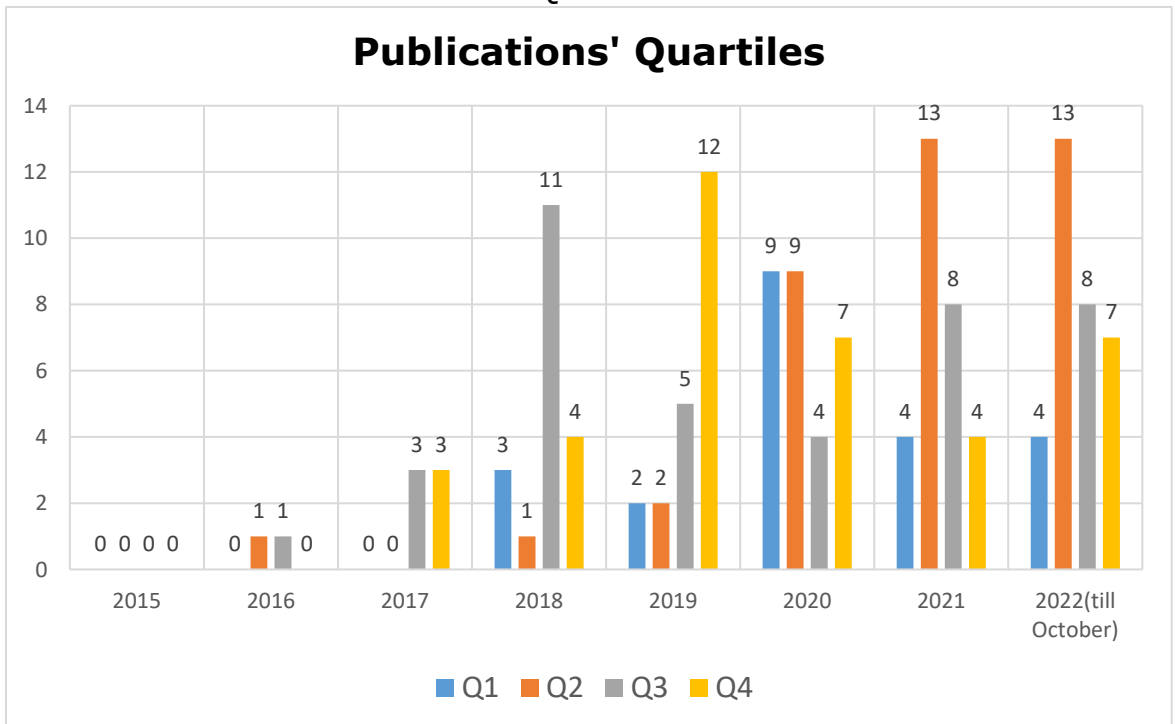


SCOPUS PUBLICATIONS NO. PER YEAR



Total of Quartile numbers: Q1: 22 Q2: 37 Q3: 38 Q4: 33

Publications' Quartiles



Students & Staff Research Publications

1. Abir A. Elfiky
Ayman A. Diab
Mona A. Khamis
Ayman T. A. Morsy

Elfiky, A. A., **Diab, A. A., Khamis, M. A.**, & Morsy, A. T. (2021). Improvement Of Snake Antisera Production Using New Innovative Adjuvants (W/O Formulation). *Journal of the Egyptian Society of Parasitology*, 51(2), 297-304.

Source: Scopus **SJR:** 0.16
Quartile: Q4
 2. Nasser Ghanem
Romysa Samy
Beshoy SF Khalil
Ibrahim Abdalla Hassan
Ahmed Yousry Sayed
Esraa Moheb
Ayman A. Diab
Gehan Safwat
Md. Fakruzzaman
Il-Keun Kong

Ghanem, N., Samy, R., Khalil, B. S. F., Barakat, I. A. H., Ahmed, A. Y. S., Ismail, E. M. A., ... & Kong, I. K. (2021). Mitochondrial activity and transcript abundance of quality marker genes during in vitro maturation of bovine and buffalo's oocytes. *Adv. Anim. Vet. Sci*, 9(11), 1810-1815.

Source: Scopus **SJR:** 0.18
Quartile: Q3
-

3. Ashraf S.A. El-Sayed
Hanaa Salah Maamoun
Gamal H. Rabie
Yara Morsy
Mostafa G. Ali
Amgad M. Rady
- El-Sayed A. S. A, Maamoun H. S, Rabie G. H, Shaker I, Alaidaroos B. A, Ali M. G, **Rady A. M.** Microbial Tyrosinase: Biochemical, Molecular Properties and Pharmaceutical Applications. *Biomed Pharmacol J* 2021;14(3).
Source: Scopus **SJR:** 0.191
Quartile: Q4
-
4. Simona Campora
Reham Mohsen
Daniel Passaro
Howida Samir
Hesham Ashraf
Saif El-Din Al-Mofty
Ayman A. Diab
Ibrahim M. El-Sherbiny
Martin J. Snowden
Giulio Gheresi
- Campora, S., Mohsen, R., Passaro, D., Samir, H., Ashraf, H., Al-Mofty, S. E. D., ... & Gheresi, G. (2021). Functionalized Poly (N-isopropylacrylamide)-Based Microgels in Tumor Targeting and Drug Delivery. *Gels*, 7(4), 203.
Source: Scopus **SJR:** 0.56
Quartile: Q2
-
5. Alia Farid
Mohamed El-Dewak
Gehan Safwat
Ayman Diab
- Farid, A., **El-Dewak, M., Safwat, G., & Diab, A.** (2021). Anti-apoptotic and antioxidant effects of melatonin protect spleen of whole body γ -irradiated male Sprague-dawley rats. *International Journal of Radiation Research*, 19(4), 861-872.
Source: Scopus **SJR:** 0.25
Quartile: Q4

6. Sameh H. Youseif
Fayrouz H. Abd El-Megeed
Ali S. Abdelaal
Amr Ageez
Esperanza Mart´inez-Romero
- Youseif, S. H., Abd El-Megeed, F. H., Abdelaal, A. S., Ageez, A., & Mart´inez-Romero, E. (2021). Plant-microbe-microbe interactions influence the faba bean nodule colonization by diverse endophytic bacteria. *FEMS microbiology ecology*, 97(11), fiab138.
- Source:** Scopus **SJR:** 1.37
Source: Thomson Reuters **IF:** 4.19
Quartile: Q1
-
7. Hanady G. Nada
Reham Mohsen
Marina E. Zaki
Amina A. Aly
- Nada, H. G., Mohsen, R., Zaki, M. E., & Aly, A. A. (2021). Evaluation of chemical composition, antioxidant, antibiofilm and antibacterial potency of essential oil extracted from gamma irradiated clove (*Eugenia caryophyllata*) buds. *Journal of Food Measurement and Characterization*, 1-14.
- Source:** Scopus **SJR:** 0.50
Source: Thomson Reuters **IF:** 2.43
Quartile: Q2
-
8. Ashraf S. A. El-Sayed
Maher Fathalla
Ahmed A. Shindia
Amgad M. Rady
Ashraf F. El-Baz
Yara Morsy
Basel Sitohy
Mahmoud Sitohy
- El-Sayed, A. S., Fathalla, M., Shindia, A. A., Rady, A. M., F El-Baz, A., Morsy, Y., ... & Sitohy, M. (2021). Purification and Biochemical Characterization of Taxadiene Synthase from *Bacillus koreensis* and *Stenotrophomonas maltophilia*. *Scientia Pharmaceutica*, 89(4), 48.
- Source:** Scopus **SJR:** 0.51
Quartile: Q2

-
9. Thanaa Helal
Abdelmalek Essaâdi
Hagar Elghazawy
Ahmed Aref
Mohamed Kelany
Lamiaa Abdallah
Fatma Abdelbakey
Dalia Ali
Doaa Ali
Mai Ahmed
Amer Abd El-Hafeez
Mohamed Alorabi
- Elghazawy, H., Alorabi, M. O., Helal, T., Aref, A., Kelany, M., Abdallah, L. E., ... & Ahmed, M. (2019). Clinico-pathological relationship between androgen receptor (AR) and tumor infiltrating lymphocytes (TILs) in triple negative breast cancer (TNBC). *Annals of Oncology*, 30, iii22-iii23.
-
10. **Yara Ahmed**
Hamdy Hasanin
Moahmed Ali
Gehan Safwat
Naglaa Hassan
Khalda Amr
- Hassaneen, H. M., El-Dessouky, M. A., Safwat, G., Hassan, N. A. M., & Amr, K. (2021). Study The Expression of DYRK1B Gene And Its Association With Metabolic Syndrome Among The Egyptians.
- Source:** Scopus **SJR:** 0.53
Source: Thomson Reuters **IF:** 2.31
Quartile: Q4
-

-
11. Amina A. Aly
Noha E. Eliwa
Zeyad M. Borik
Gehan Safwat
- ELIWA, N. E., **BORIK, Z. M., & SAFWAT, G.** (2021). Physiological variation of irradiated red radish plants and their phylogenetic relationship using SCoT and CDDP markers. *Notulae Botanicae Horti Agrobotanici Cluj-Napoca*, 49(3), 12396-12396.
- Source:** Scopus **SJR:** 0.53
Source: Thomson Reuters **IF:** 2.31
Quartile: Q4
-
12. Amina A. Aly
Rabab W. Marei
Yousef A. Louis
Gehan Safwat
- ALY, A. A., MARAEI, R. W., **LOUIS, Y. A., & Safwat, G.** (2021). Assessment of irradiated TiO₂nanoparticles on the growth and nanoparticles on the growth and nutritional components of broccoli.
- Source:** Scopus **SJR:** 0.33
Source: Thomson Reuters **IF:** 1.44
Quartile: Q3
-
13. **Gina Mahrous**
Nourhan el kholi
Gehan Safwat
Medhat Shafaa
- Mahrous, G. R.,** Elkholy, N. S., **Safwat, G.,** & Shafaa, M. W. (2021). Enhanced cytotoxic activity of beta carotene conjugated liposomes towards breast cancer cell line: comparative studies with cyclophosphamide. *Anti-Cancer Drugs*, 33(1), e462-e476.
- Source:** Scopus **SJR:** 0.65
Source: Thomson Reuters **IF:** 2.24
Quartile: Q2
-

-
14. NashwaEL-Khazragya
 Mahfouz A.Abdel Aziz
 Manar Hesham
 Safa Matbouly
 Sally Abdallah
Ashraf Bakkar
Mariam Abouelnile
 YassminNoufal
 Nievin Ahmed
 Marwa AliAbd Elkhalek
 Mariam
 FathyAbdelmaksoudh
- Nashwa, E. K., Aziz, M. A. A., Hesham, M., Matbouly, S., Mostafa, S. A., **Bakkar, A.**, ... & Abdelmaksoud, M. F. (2021). Upregulation of leukemia-induced non-coding activator RNA (LUNAR1) predicts poor outcome in pediatric T-acute lymphoblastic leukemia. *Immunobiology*, 226(6), 152149.
- Source:** Scopus **SJR:** 0.94
Source: Thomson Reuters **IF:** 3.14
Quartile: Q2
-
15. **Youssra Moustafa**
 Atabak Ghanizadeh
 Tighsazzadeh
 Uttom Nandi
 Roxanne Khalaj
 Ioannis Andreadis
 Joshua S Boateng
 Dennis Douroumis
- Mohamdeen, Y. M. G.**, Tabriz, A. G., Tighsazzadeh, M., Nandi, U., Khalaj, R., Andreadis, I., ... & Douroumis, D. (2021). Development of 3D printed drug-eluting contact lenses. *Journal of Pharmacy and Pharmacology*.
- Source:** Scopus **SJR:** 2.57
Source: Thomson Reuters **IF:** 0.74
Quartile: Q2
-

-
16. Salma Basyouni
Hamada Nermeen
Hamza
- Hamada, S. B., Hamza, N., **Mohsen, R.**, & Kamel, F. (2021). Effect of two different Materials; Microgel p (NIPAM) and Sodium Fluoride on the Depth and Degree of Occlusion of the Dentinal Tubules at Different Dentin Depths.

Reham Mohsen

Faten Kamel

17. Essa M. Saied
- Yousra A. El-Maradny
Alaa A. Osman
- Saied, E. M., El-Maradny, Y. A., Osman, A. A., Darwish, A. M., H Abo Nahas, H., Niedbała, G., ... & Abdel-Azeem, A. M. (2021). A comprehensive review about the molecular structure of severe acute respiratory syndrome Coronavirus 2 (SARS-CoV-2): Insights into natural products against COVID-19. *Pharmaceutics*, 13(11), 1759.

Amira M. G. Darwish

Hebatallah H. Abo

Nahas Gniewko Niedbała

Magdalena Piekutowska

Mohamed A. Abdel-

Rahman

Source: Scopus **SJR:** 1.05

Source: Thomson Reuters **IF:** 6.32

Quartile: Q1

Bassem A. Balbool

Ahmed M. Abdel-Azeem

-
18. Abdulrahman L. Al-Malki
Ashraf Bakkar
Etimad A. Huwait
Elie K. Barbour
Kalid O. Abulnaja
Taha A. Kumosani
Said S. Moselhy
- Al-Malki, A. L., **Bakkar, A.**, Huwait, E. A., Barbour, E. K., Abulnaja, K. O., Kumosani, T. A., & Moselhy, S. S. (2021). Strigol1/albumin/chitosan nanoparticles decrease cell viability, induce apoptosis and alter metabolomics profile in HepG2 cancer cell line. *Biomedicine & Pharmacotherapy*, 142, 111960.
- Source:** Scopus **SJR:** 1.19
Source: Thomson Reuters **IF:** 6.52
Quartile: Q1
-

19. Ayman Sayed
Ghada A. Mahmoud
Heba Said
Ayman A. Diab
- Sayed, A., **Mahmoud, G. A.**, Said, H., & **Diab, A. A.** (2022). Characterization and optimization of magnetic Gum-PVP/SiO₂ nanocomposite hydrogel for removal of contaminated dyes. *Materials Chemistry and Physics*, 125731.
- Source:** Scopus **SJR:** 0.76
Source: Thomson Reuters **IF:** 4.9
Quartile: Q2
-

-
20. Samah Mamdouh
Fatma Khorshed
Gehan Hammad
Khaled Elesaily
Gehan Safwat
Olfat Hammam
Tarek Aboushousha
- Mamdouh, S., Khorshed, F., Hammad, G., Elesaily, K., **Safwat, G.**, Hammam, O., & **Aboushousha, T.** (2022). Molecular Detection of Genetic Susceptibility to Bladder Cancer in Egyptian Patients.
Source: Scopus **SJR:** 0.5
Quartile: Q2
-

21. **Norhan Yasser**
Samy Sayed
Nashwa Ghanem
Amal Thabit
Aziza Abdelal
Wael Elmenofy
Engy Osman
- Yasser, N.**, Sayed, S., Ghanem, N., Thabit, A., Abdelal, A., Elmenofy, W., & Osman, E. (2022). Determination of virulence and genetic variability of three *Spodoptera littoralis* nucleopolyhedrovirus isolates from Egypt. *Egyptian Journal of Biological Pest Control*, 32(1), 1-7.
Source: Scopus **SJR:** 0.76
Source: Thomson Reuters **IF:** 0.45
Quartile: Q2
-

-
22. Amal Ahmed Mohamed
Ahmed E. Allam
- Ahmed M. Aref**
- Maha Osama Mahmoud
Noha A. Eldesoky
- Naglaa Fawazy
- Yasser Sakr
- Mohamed Emam
Sobeih Sarah Albogami
- Eman Fayad
- Abdelgeliel Rania S.
Abdel Aziz
- Mohamed, A. A., Allam, A. E., **Aref, A. M.**, Mahmoud, M. O., Eldesoky, N. A., Fawazy, N., ... & Abdel Aziz, R. S. (2022). Evaluation of Expressed MicroRNAs as Prospective Biomarkers for Detection of Breast Cancer. *Diagnostics*, 12(4), 789.
- Source:** Scopus **SJR:** 0.62
- Source:** Thomson Reuters **IF:** 3.70
- Quartile:** Q2
-

23. Alyaa Farid
Mona Yousry
- Gehan Safwat**
- Farid, A., Yousry, M., & **Safwat, G.** (2022). Garlic (*Allium sativum* Linnaeus) improved inflammation and reduced cryptosporidiosis burden in immunocompromised mice. *Journal of Ethnopharmacology*, 292, 115174.
- Source:** Scopus **SJR:** 0.88
- Source:** Thomson Reuters **IF:** 4.36
- Quartile:** Q1
-

-
24. Mohamed A. Abdelmonem
Mohamed A. Kelany
Manal Fawzy
Reem sheta
Amr Ageez
Sherein I. Abd El-Moez
- Abd El-Moez, I. (2022). Detection of SHIGA-TOXIN producing E. coli in some retail markets in Egypt using qPCR assay with special reference to serotyping.
Source: Scopus **SJR:** 0.12
Quartile: Q4
-
25. Alyaa Farida
Ali Hany
Ahmed Khaled
GehanSafwat
- Farid, A., **Hany, A., Khaled, A., & Safwat, G.** (2022). Cytokines and autoantibodies profile during systemic lupus erythematosus and psoriasis diseases in Egypt. *Journal of King Saud University-Science*, 34(4), 102007.
Source: Scopus **SJR:** 0.57
Source: Thomson Reuters **IF:** 4.01
Quartile: Q1
-
26. Neveen Adel Madbouly
Mohammed Emam
Malak Ayman
Mohammed Ayman
Ibraheem Rabia
Azza El Amir
- Madbouly, N. A., **Emam, M., Ayman, M., Ayman, M., Rabia, I., & El Amir, A.** (2022). In vitro and in vivo impacts of nifedipine and diltiazem on praziquantel chemotherapy in murine *Schistosoma mansoni*. *Experimental Parasitology*, 236, 108256.
Source: Scopus **SJR:** 0.58
Source: Thomson Reuters **IF:** 2.01
Quartile: Q3
-

-
27. Hanan Elimam
Jihan Hussein
Yasmin Abdel-Latif
Amal Kamal Abdel-Aziz
Khalid M. El-Say
- Elimam, H., Hussein, J., **Abdel-Latif, Y.**, Abdel-Aziz, A. K., & El-Say, K. M. (2022). Preclinical activity of fluvastatin-loaded self-nanoemulsifying delivery system against breast cancer models: Emphasis on apoptosis. *Journal of Cellular Biochemistry*.
- Source:** Scopus **SJR:** 1.02
Source: Thomson Reuters **IF:** 4.42
Quartile: Q2
-
28. Thanaa El-sayed Helal
Ahmed Aref
Asmaa Ibrahim Gomaa
Ola Nada
Mohamed Abd-Elghaffar
Khaled Farouk
Nermine Ahmed Ehsan
- Helal, T. E., **Aref, A.**, Gomaa, A. I., Nada, O., Abd-Elghaffar, M., Farouk, K., & Ehsan, N. A. (2022). Epithelial-Mesenchymal Transition Markers in HCVAssociated Hepatocellular Carcinoma: A Multivariate Follow Up Study.
- Source:** Scopus **SJR:** 0.51
Quartile: Q4
-

-
29. Ahmad Mustafa Fumiya
Niikura
Carlo Pastore
Hoda A. Allam
Omnia Bassam
Muhamad Mustafa
Abrar Inayat
Sameh A. Salah
Ahmed Abdel Salam
Reham Mohsen
- Mustafa, A., Niikura, F., Pastore, C., **Allam, H. A., Hassan, O. B.**, Mustafa, M., & **Mohsen, R.** (2022). Selective synthesis of alpha monoglycerides by a clean method: Techno-economic and environmental assessment. *Sustainable Chemistry and Pharmacy*, 27, 100690.
- Source:** Scopus **SJR:** 0.72
Source: Thomson Reuters **IF:** 4.5
Quartile: Q2
-

30. Asmaa Sayed
Mai Yasser
Manar El-sayed Abdel-
raouf
Reham Mohsen
- Sayed, A., **Yasser, M.**, Abdel-raouf, M. E. S., & **Mohsen, R.** (2022). Green starch/graphene oxide hydrogel nanocomposites for sustained release applications. *Chemical Papers*, 1-14.
- Source:** Scopus **SJR:** 0.33
Source: Thomson Reuters **IF:** 2.09
Quartile: Q3
-

-
31. **Haidan M. El-Shorbagy**
Shereen S. El-Liethy
Mona K. Moussa
Akmal A. Elghor
- El-Shorbagy, H.**, Aly, A., Kamel, A., Gomaa, M., & Hamad Mohamed, H. R. (2022). Excessive ROS generation and oxidative stress induction trigger chromatin dispersion and apoptosis in sperms of parents with recurrent implantation failure. *Recent Research in Genetics and Genomics*, 4(1), 1-17.
-
32. **Haidan M. El-Shorbagy**
Shereen S. El-Liethy
Mona K. Moussa
Akmal A. Elghor
- El-Shorbagy, H. M.**, El-Liethy, S. S., Moussa, M. K., & Elghor, A. A. (2022). Carrier RNA is a key factor affecting fully integrated short tandem repeats profiling in challenging forensic samples models. *The Journal of Basic and Applied Zoology*, 83(1), 1-14.
-
33. Ghada Ismail
Hossam Abdelghafar
Mohamed G. Seadawy
Mostafa F. El-Hosseney
Ahmed F. Gad
Amr Ageez
Ahmed ElShafei
- Ismail, G., Abdelghaffar, H., Seadawy, M. G., El-Hosseney, M. F., Gad, A. F., **Ageez, A.**, ... & El-Ashry, M. A. E. R. (2022). Genome sequencing reveals existence of SARS-CoV-2 B. 1.1. 529 variant in Egypt. *Journal of Genetic Engineering and Biotechnology*, 20(1), 1-5.
-

34. **Gehan Safwat**
Hemat S. Abdel Salam
Safwat, G., & Abdel Salam, H. S. (2022). The Effect of Exogenous Proline and Glycine Betaine on Phyto-biochemical Responses of Salt-stressed Basil Plants. *Egyptian Journal of Botany*, 62(2), 537-547.
Source: Scopus **SJR:** 0.21
Quartile: Q4
35. **Yasmine Hatem**
Gehan Hammad
Gehan Safwat
Hatem, Y., Hammad, G., & Safwat, G. (2022). Artificial Intelligence for Plant Genomics and Crop Improvement. *Egyptian Journal of Botany*, 62(2), 291-303.
Source: Scopus **SJR:** 0.21
Quartile: Q4
36. Amina Aly Rabab
Maraei
Ahmed Rezk
Ayman Diab
Aly, A., Maraei, R., **Rezk, A., & Diab, A.** (2022). Phytochemical constitutes and biological activities of essential oil extracted from irradiated caraway seeds (*Carum carvi* L). *International Journal of Radiation Biology*, (just-accepted), 1-17.
Source: Scopus **SJR:** 0.56
Source: Thomson Reuters **IF:**2.69
Quartile: Q2
37. Heba ElSayed
ElZorkan
Khaled Yehia Farro
Haidan M.El-Shorbagy
Hisham A.Elshoky
TareqYoussef
Taher A.Salaheldin
Salwa Sabet
ElZorkany, H. E., Farroh, K. Y., **El-Shorbagy, H. M.,** Elshoky, H. A., Youssef, T., Salaheldin, T. A., & Sabet, S. (2022). Silica-coated graphene compared to Si-CdSe/ZnS quantum dots: toxicity, emission stability, and role of silica in the uptake process for imaging purposes. *Photodiagnosis and Photodynamic Therapy*, 102919.*Biology*, (just-accepted), 1-17.
Source: Scopus **SJR:** 0.64
Source: Thomson Reuters **IF:** 3.63 **Quartile:** Q2

38. Alyaa Farida
Passant Moussa
Manar Youssef
Merna Haytham
Ali Shamy
Gehan Safwat
- Farid, A., **Moussa, P., Youssef, M., Haytham, M., Shamy, A., & Safwat, G.** (2022). Melatonin relieves diabetic complications and regenerates pancreatic beta cells by the reduction in NF-kB expression in streptozotocin induced diabetic rats Melatonin: anti-diabetic drug. *Saudi Journal of Biological Sciences*, 103313.
- Source:** Scopus **SJR:** 0.65
Source: Thomson Reuters **IF:** 4.21
Quartile: Q1
-
39. Thanaa El A Helal
Hoda E El Abdel
Wahab
Sally M Saber Waleed
Abdelaaty Mohamed M
Eltabbakh
Ahmed M Aref
Mohamed H Dawood
- Helal, T. E. A., Wahab, H. E. E. A., Saber, S. M., Abdelaaty, W. H., Eltabbakh, M. M., Aref, A. M., & Dawood, M. H. (2022). Molecular detection of pathogenic bacteria in the colonic biopsies from patients with Ulcerative Colitis. *African Health Sciences*, 22(1), 602-10.
- Source:** Scopus **SJR:** 0.32
Source: Thomson Reuters **IF:** 0.92
Quartile: Q3
-
40. Moustafa A.Shehataa
Ana Martín-Hurtado
Aurane Froux
Hossam Taha
Mohamed
Ahmed A.El-Sherif
Iván Plaza-Menacho
- Shehata, M. A., Contreras, J., Martín-Hurtado, A., Froux, A., Mohamed, H. T., El-Sherif, A. A., & Plaza-Menacho, I. (2022). Structural dynamics for highly selective RET kinase inhibition reveal cryptic druggability. *Journal of Advanced Research*.
- Source:** Scopus **SJR:** 1.8
Source: Thomson Reuters **IF:** 10.4
Quartile: Q1

-
41. Mona A. Mohammed
Bassant M.M. Ibrahim
Yasmin Abdelatif
Azza H. Hassan
Mohamed A. El Raey
Emad M. Hassan
Souad E. El-Gengaihi
- Mohammed, M.A., Ibrahim, B.M.M., **Abdel-Latif, Y. et al.** Pharmacological and metabolomic profiles of *Musa acuminata* wastes as a new potential source of anti-ulcerative colitis agents. *Sci Rep* **12**, 10595 (2022). <https://doi.org/10.1038/s41598-022-14599-8>
- Source:** Scopus **SJR:** 1.005
Source: Thomson Reuters **IF:** 4.379
Quartile: Q1
-

42. Amr Ahmed
WalyEldeen
Haidan M. El-Shorbagy
Hamdi M. Hassaneen
Ismail A. Abdelhamid
Salwa Sabet
Sherif Abdelaziz
Ibrahim
- WalyEldeen, A. A., **El-Shorbagy, H. M.**, Hassaneen, H. M., Abdelhamid, I. A., Sabet, S., & Ibrahim, S. A. (2022). [1, 2, 4] Triazolo [3, 4-a] isoquinoline chalcone derivative exhibits anticancer activity via induction of oxidative stress, DNA damage, and apoptosis in Ehrlich solid carcinoma-bearing mice. *Naunyn-Schmiedeberg's Archives of Pharmacology*, 1-14.
- Source:** Scopus **SJR:** 0.566
Quartile: Q2
-

43. Tahani Younis Omar
Habiba Ihab Ahmed Elshenawy
 Marwa Ahmed
 Abdelfattah
 Abdeljalil
 Mohamed Al Shawoush
 Ayman Saber Mohamed
- Omar, T. Y., **Elshenawy, H. I. A.**, Abdelfattah, M. A., Al Shawoush, A. M., Mohamed, A. S., & Saad, D. Y. (2022). Biointerference between Zinc Oxide/Alginate Nanocomposites and Freshwater Bivalve.
Source: Scopus **SJR:** 0.247
Quartile: Q3
-
44. **Hossam Taha Mohamed**
 Aya Ali El-Sharkawy
 Mohamed El-Shinawi
 Robert J. Schneider
 Mona Mostafa
 Mohamed
- Mohamed, H. T.**, El-Sharkawy, A. A., El-Shinawi, M., Schneider, R. J., & Mohamed, M. M. (2022). Inflammatory Breast Cancer: The Secretome of HCMV+ Tumor-Associated Macrophages Enhances Proliferation, Invasion, Colony Formation, and Expression of Cancer Stem Cell Markers. *Frontiers in Oncology*, 12.
Source: Scopus **SJR:** 1.29
Source: Thomson Reuters **IF:** 6.24
Quartile: Q1
-
45. Hanan R. H.
 Mohamed
 Maria M. H.
 Ibrahim2
Esraa S. M. Soliman Gehan Safwat Ayman Diab
- Mohamed, H., Ibrahim, M., **Soliman, E., Safwat, G., & Diab, A.** (2022). Estimation of Calcium Titanate or Erbium Oxide Nanoparticles Induced Cytotoxicity and Genotoxicity in Normal HSF Cells. *Biological Trace Element Research*. <https://doi.org/10.1007/s12011-022-03354-9>
Source: Scopus **SJR:** 0.64
Source: Thomson Reuters **IF:** 3.7
Quartile: Q2

46. Hanan R. H. Mohamed
Maria M. H. Ibrahim
Esraa S. M. Soliman
Gehan Safwat
Ayman Diab
- Mohamed, H. R., **Ibrahim, M. M., Soliman, E. S., Safwat, G., & Diab, A.** (2022). Estimation of Calcium Titanate or Erbium Oxide Nanoparticles Induced Cytotoxicity and Genotoxicity in Normal HSF Cells. *Biological Trace Element Research*, 1-8.
- Source:** Scopus **SJR:** 0.64
Source: Thomson Reuters **IF:** 3.7
Quartile: Q2
-
47. Alyaa Farid,
Hebatallah Haridyy,
Salma Ashraf
Selim Ahmed
Gehan Safwat
- Farid, A., **Haridyy, H., Ashraf, S., Ahmed, S., & Safwat, G.** (2022). Aloe vera gel as a stimulant for mesenchymal stem cells differentiation and a natural therapy for radiation induced liver damage. *Journal of Radiation Research and Applied Sciences*, 15(3), 270-278.
- Source:** Thomson Reuters **IF:** 1.77
-
48. **Sameh H. Youseif**
Hanan M. K.
Abdel-Fatah
Mary S. Khalil
- Youseif, S. H.,** Abdel-Fatah, H. M., & Khalil, M. S. (2022). A new source of bacterial myrosinase isolated from endophytic *Bacillus* sp. NGB-B10, and its relevance in biological control activity. *World Journal of Microbiology and Biotechnology*, 38(11), 1-17.
- Source:** Scopus **SJR:** 0.673
Quartile: Q3
-
49. Tahani Younis Omar
Elizabeth Samir
Sadek
Manar Ahmed
Bahaaeldin
Aya Rmadan Rashed
Abdeljalil Mohamed Al
Shawoosh
Ayman S. Mohamed
Dalia Y. Saad
- Omar, T. Y., **Sadek, E. S.,** Bahaaeldine, M. A., Rashed, A. R., Shawoosh, A. M. A., Mohamed, A. S., & Saad, D. Y. (2022). Freshwater clam as a potential bioindicator for ZnO-agar nanocomposite toxicity. 11.

50. Abir A. Elfiky
Erene F. Girgis
Mohamed M. Zid
Yasmin E. Mohamed

ELFIKY, A. A., GIRGIS, E. F., **ZID, M. M., & MOHAMED, Y. E. (2022)**. CROSS NEUTRALIZATION OF SOME KINDS OF VIPERS AND SNAKE VENOMS FROM AFRICA AND MIDDLE EAST USING VACSERA POLYVALENT VIPER ANTISERA. *Journal of the Egyptian Society of Parasitology*, 52(2), 363-370.

Source: Scopus **SJR:** 0.165

Quartile: Q4



Students and Staff Awards

Students & Staff Awards

The faculty of Biotechnology have been actively participating in a number of competitions and conferences these past couple of years. It is of great honor that students and staff have always received high praise and even been awarded several placements.



Total no. **(4)**

Students awarded **(4)**

Senior Students Recognition Awards (Fall)

Students participated in Science Operation leaders in Egypt "SOLE" which one of the most important national competitions tailored for biotechnology students all over the Egyptian universities.

On the 8th season hosted by Nile university 12 universities has participated, and proudly as usual students of Faculty of Biotechnology, MSA University won the **first place prize** in "Case study analysis" competition. The case study analysis team who won the prize were **Maya Mohamed, Marwan Ayman, Andrew Ashraf, Hana Selim.**





Academic Events

Graduation Projects Discussion Day (Fall)

A spectacular event for the Faculty of Biotechnology. The Faculty of Biotechnology organized its graduation projects' presentations with **197 students** with individual project presentations. The event comprised **75 different external** examiners who attended and evaluated the presentations and applauded the efforts of the faculty.



Graduation Projects Discussion Day (Fall)

Additionally, this year the faculty of Biotechnology has granted **7 students a research fund** for their first graduation project, in the loving memory of **Dr. Osama Saad**, at several locations including the Faculty of Nanotechnology, Cairo University (El Sheikh Zayed Campus), and the Egyptian Petroleum research center (EPRI). Finally, the faculty was keen on maintaining the adequate safety precautions and social distancing measures for all attendees.



The Exhibition on the Versatility of Biotechnology (Fall)

The “**Introduction to Biotechnology**” course exhibition showcased the applications and advances of the different fields of biotechnology, the **230 students** participated in the exhibition as a part of the course. The exhibition was dedicated to the late **Dr. Osama Saad**. He incepted this exhibition in 2015 annually, and we continue this tradition in his honor, may his soul rest in peace. Organized by **Dr. Hisham Elshistawy, L.A. Gihan Hammad, L.A. Fouad Ashry, L.A. Nashwa Hamido, T.A. Mohamed Mansour, T.A. Noran Yehia and T.A. Reem Sheta**.



Different Abilities Empowerment Session (Fall)

The College sponsored and organized the week of the Willing Ones. Among its activities was a unique event that includes successful models capable of excelling amid all challenges. The College invited everyone to be part of the activities of this globally celebrated day, This event was organized by **LA. Gihan Hammad, L.A. Fouad Ashry, L.A. Sandra Habib, L.A. Nashwa Hamido and T.A. Sameh Elsabbahy.**



The Flourishing of the Biotechnology Market in Egypt (Spring)

The Faculty of Biotechnology arranged event to discuss the flourishing of the Biotechnology market in Egypt in the past few years and how the international dynamics have played a crucial role in the market flourishing process. The faculty hosted two speakers from HVD Life Sciences company, which is one of the international companies that works in the field of the biotech industry.

The first speaker was **Mrs. Nourhan Elsayhly** who is the manager of the scientific department of the company and the second speaker was **Mr. Amr Elmoslamy** who is the manager of the sales department.

This event was arranged under supervision of **Dr. Fayrouz Sayed** to help the students of the faculty to get to know more about the biotech industry in Egypt and plan ahead, how can they contribute to this industry with their knowledge and skills.

The Flourishing of the Biotechnology Market in Egypt (Spring)



Industrial Projects Poster Discussion Day (Spring)

The Faculty of Biotechnology, organized the industrial projects' poster discussion day where over **250 students** presented their proposal ideas in the form of scientific posters. The projects included a wide array of fields inspired from the field trips the students attended throughout the term and the guest speaker sessions and This represents completing the cycle of situated pedagogy with project-based implementation.



Industrial Projects Poster Discussion Day (Spring)

The students were evaluated by Professors and Assistant lecturers, who evaluated the students' presentation skills, poster designs, and the feasibility of their ideas. Impressive feedback was received on a multitude of projects, which were interdisciplinary or multidisciplinary, and were also in alignment with the United Nations Sustainable Development Goals.

Among the interesting projects were those pertaining to employing artificial intelligence for diagnosis, using algal biofilms for water treatment in fisheries, developing an approach for employing microorganisms for bioremediation of ancient temples; the production of biodiesel from plant oils; Dual Solar energy production and water treatment via nanoparticles; the development of green disinfectants and many more.

Students are due to complete their project proposals using the STDF template and prepare presentations at the end of the term with finalized research ideas. This discussion was a part of the industrial projects course under the supervision of **Dr. Gehan Safwat** and was organized by **L.A. Shaza Habib, L.A. Gehan Hammad, L.A. Yara Ahmed, L.A. Fouad Ashry, LA. Sandra Habib, T.A. Mohamed Mansour, T.A. Reem Sheta, T.A. Sameh El-Sabbahy, T.A. Noura Mohamed** and **T.A. Sara Badawi**.

Industrial Projects Poster Discussion Day (Spring)



Zero Hunger (Spring)

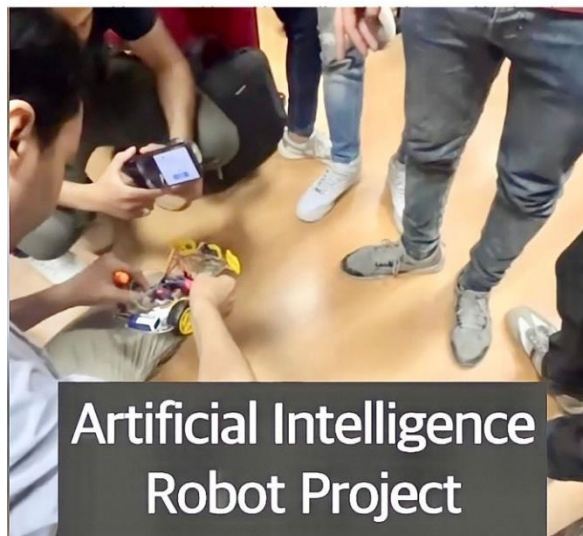
A group of students in the “Cell and Tissue Culture course (BT202)” at the Faculty of Biotechnology, were able to successfully design a real model of plant tissue culture within the faculty's laboratory. They started from the basic stages of plant tissue culture till they produced a whole plant.



This was achieved by the use of the appropriate nutritious media that provides plants with all the needed nutrients and optimum environment. Plant tissue culture technology is one of the most promising technologies in providing abundant plant resources and food to the world, which aids in achieving one of the SDG goals of the United Nations "Zero Hunger".

Artificial Intelligence Robot Project (Spring)

The Artificial Intelligence course has focused on the basic principles of Artificial intelligence (AI), with an overview of the recent machine learning and deep learning applications in Biotechnology. A total number of **57 students** were divided into 4 groups, each group collected their own robot car called OpenBot, which is an open-sourced Intel platform for basic robotics for educational and research purposes. They studied, programmed, operated, and collected the data saved by the robot to be prepared as a dataset to initiate a simple data mining approach (A Zero-coding Deep learning modeling). Throughout the project students learned the ABCs of the techniques used in the modern automation and robotics systems. This project was done under the supervision of **Dr. Ahmed Goma**.



Biological 3D Printing Project (Spring)

The biological 3D printing course has focused on the basic principles of 3D printing, with an overview on the applications of 3D printing in medical science and food technology. As a part of the course assessments the students were asked to create 3D models of microbiology and molecular biology labware's on the blender software. This project was done under the supervision of **Dr. Ahmed Gomaa**.

Biological 3D Printing Project (Spring)



Awareness Campaigns

Violence Against Women (Fall)

Supporting the United Nations initiative to end violence against women within 16 days of awareness through all worldwide countries until **25th of November**. The faculty of Biotechnology has hosted the violence against women awareness day with orange theme color to support equality in gender.



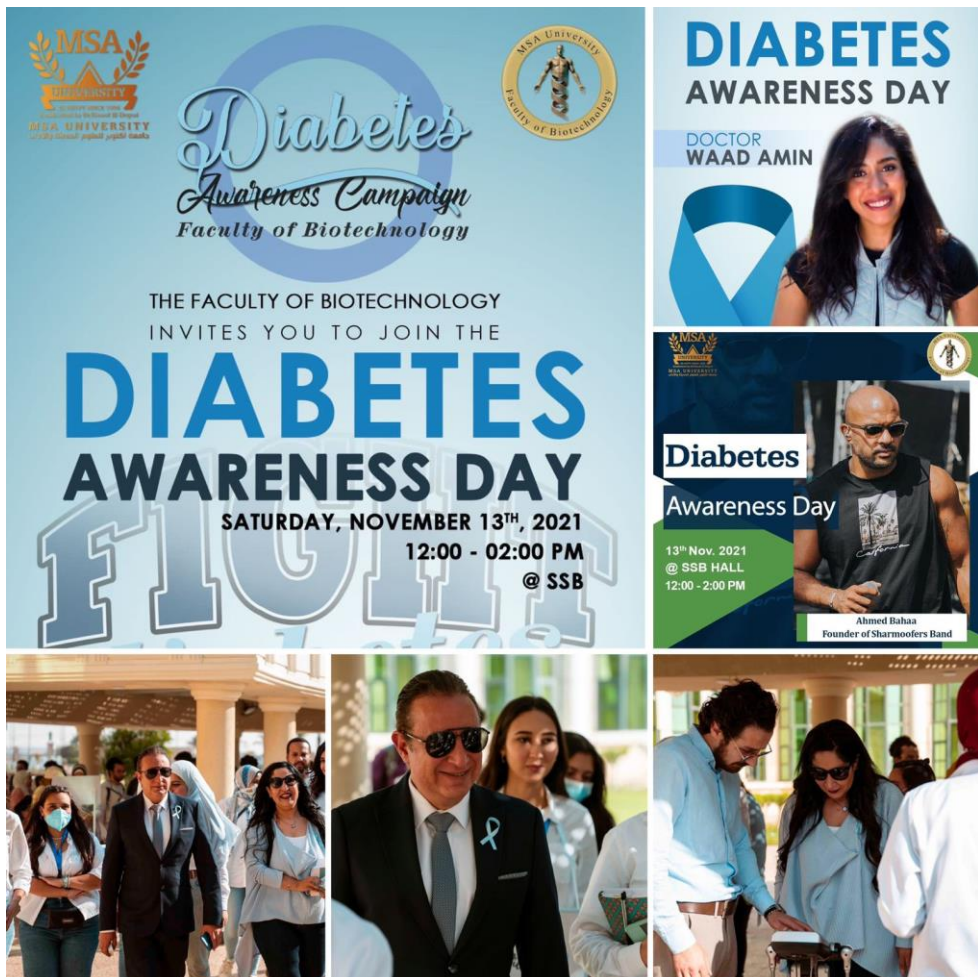
Violence Against Women (Fall)

The awareness team has distributed awareness flyers all over the university to support and end violence against women. This day was organized by **L.A. Gehad Tarek, L.A. Shorouk Mohamed, T.A. Mohamed Mansour, T.A. Nareeman Nabil, T.A. Nada Nasser.**



2nd Diabetes Awareness Campaign (Fall)

The faculty of Biotechnology organized the Diabetes Awareness day for the second time, coinciding with the Diabetes Awareness Month on the university campus on Saturday, November 13th, joined by the nutritionist **Dr. Waad Amin**, who gave a lecture on insulin resistance and the negative effect of unhealthy lifestyle and diet on the development of the disease and methods of prevention.



2nd Diabetes Awareness Campaign (Fall)

This day was sponsored by **Bionime** for measuring blood sugar and **Doctor Nutrition** for analyzing the body composition analysis using the inbody machine. This event was organized by, **L.A. Yara Ahmed, L.A. Youssra Rashwan, L.A. Gehad Tarek, L.A. Dalia Hesham, L.A. Nourhan Yasser, T.A. Mohamed Mansour** and **T.A. Noran Yehia**.



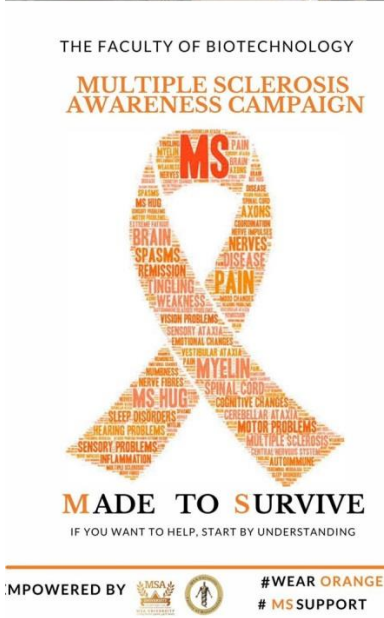
Waste Treatment and Sustainability Awareness Campaign

The **environmental biotechnology course** students devised a campaign to define **sustainable waste management and spread the awareness of using eco-friendly products**, as well as the role of biotechnology to treat wastes to produce a commercial product, highlighting the importance of sustainable development. The campaign aligned with **SDG 7**.



Multiple Sclerosis (MS) Awareness campaign (spring)

The Faculty of Biotechnology staff members and students held a two weeks awareness campaign to shine a light on **MS** through various activities such as a game session to quiz and a special appearance by the Youtuber "Sciensoup".



Multiple Sclerosis (MS) Awareness campaign (Spring)

They attempted to ensure that more people understand what life with MS can be like and engage them to do something about it by sharing the information they learned from the campaigners. Multiple Sclerosis (MS) is unpredictable and different from one person to another. This event was organized by **L.A. Gehad Tarek, L.A. Nashwa Hamido and T.A. Nouran Yehia.**



Staff & Students

Conferences

Staff members and students at the faculty have succeeded to make various submissions to esteemed national and international conferences and managed to get acceptance letters to participate in poster presentations and even as guest speakers.



Total no. of conferences
(3)

SOLE (Fall)

Thirteen students from the Faculty of Biotechnology attended and participated in the **8th season** of the “Pioneers of Science Application in Egypt” competition, which is the first competition of its kind for students of the Faculty of Biotechnology and Nile University along with other 12 different universities in Egypt.



AACR Annual Meeting 2022 (Spring)

Dr. Hossam Taha and **LA. Shaza Habib** have attended and participated with a live poster from 8th-13th of April in the annual meeting of American Association for Cancer Research (AACR).



Background: Many studies suggested that the pathogenesis of inflammatory breast cancer (IBC) is related to inflammatory manifestations and changes in the tumor microenvironment (TME). IBC is characterized by significantly higher infiltration of tumor-associated macrophages (TAMs). TAMs contribute to the metastatic process in IBC patients via secreting many cytokines such as NF-IL-6, IL-8, and IL-10 that enhance invasion and angiogenesis. To understand the role of TAMs in IBC, there is a need to first understand how IBC TME affects the polarization of tumor infiltrated monocytes via using sensitive and accurate analytical tools. Synchrotron FTIR microspectroscopy (SR-μFTIR) is a highly advanced analytical approach that can detect any biochemical changes even before any morphological changes. Herein we will use SR-μFTIR to study the biochemical changes in tumor-infiltrating monocytes after stimulation by the secretome of non-IBC and IBC breast cancer cells.

Methods: 15 breast cancer patients were enrolled in this study (5 IBC and 10 non-IBC). Mononuclear cells within the TME biopsies were characterized by flow cytometry analysis. Tumor-infiltrated monocytes were isolated from the patient's TME blood samples which were collected during modified radical mastectomy surgery. The isolated monocytes were polarized into TAMs via seeding in growth media conditioned by the secretome of MCF7, MDA-MB-1, and SUM149 cell lines. A real-time PCR array was used to determine the mRNA expression of macrophage polarization-related genes. SR-μFTIR single-cell analysis was used to determine the IR facility at the SESAME light source. The obtained raw spectral data were processed and analyzed using NPLS (Non-linear iterative Partial Least Squares) algorithm.

Results: 1. Microscopic examination of *in vitro* polarized TAMs. 2. *In vitro* polarized TAMs transcriptome analysis. 3. Synchrotron infrared microspectroscopy single fixed cell analysis.

Figure 1: Microscopic images showed *in vitro* polarized TAMs.

Figure 2: Transcriptome analysis of *in vitro* polarized TAMs. (A) Clustered bar represent the mRNA expression of macrophage polarization-related genes in HCMV- and HCMV+ polarized TAMs compared to mock cells. (B-D) Heatmaps of the top 100 differentially expressed genes in HCMV- and HCMV+ polarized TAMs.

Figure 3: Synchrotron infrared microspectroscopy single fixed cell analysis for *in vitro* polarized TAMs. (A) Baseline and second derivative spectra of different polarized TAMs. (B) Curve fitting at Amides I and II region (1700 – 1500 cm⁻¹) and lipid absorption region (2800 – 3000 cm⁻¹). (C and D) The Principal Component Analysis (PCA) was performed on the lipid region of the FTIR spectra and on the second derivative spectra of the amide region using NPLS (Non-linear iterative Partial Least Squares) algorithm.

Conclusion: The obtained results showed that there is a different effect of non-IBC and IBC cells on the polarization of TAMs even with the cell surface markers looking the same and from this, we may start to understand different roles of TAMs in the IBC.

High Resolution Melting Technique as an Economic Prognostic Tool For Identifying Deleterious Mutations in BRCA1, BRCA2 and P53 Genes Amongst Breast Cancer Women

Shaza Ahmed^{1,2}, Noura A. Abdel Fattah³, Shima A. Metwally⁴, Marwa A. Abdelwahed⁵, Hossam Taha Mohamed⁶, Sara H. A. Agwa⁷, AbdelWahab El Ghazeb⁸, Gehan Safwat⁹, Ahmed A. El Sherif¹⁰, Mohamed M. Moneer¹¹, Samah A. Loutfy¹²

Poster for AACR 2022-Abstract Number: 5842 Session: Tumor Suppressor Genes Session Title: Oncogenes and Tumor Suppressor Genes

¹Faculty of Biotechnology, October University for Modern Sciences and Arts, Giza 12511, Egypt. ²Zoology Department, Faculty of Science, Cairo University, Giza 12613, Egypt. ³Virology and Immunology Unit, Cancer Biotechnology Department, National Cancer Institute (NCI), Cairo University, Giza, Egypt. ⁴Immunology & Immunology Department, Faculty of Pharmacy for girls, Al-Azhar University, Cairo, Egypt. ⁵Clinical Pathology Department, Faculty of Medicine, Ain Shams University, Cairo, Egypt. ⁶Faculty of Biotechnology, October University for Modern Sciences and Arts, Giza 12511, Egypt. ⁷Zoology Department, Faculty of Science, Cairo University, Giza 12613, Egypt. ⁸Clinical Pathology Department, Faculty of Medicine, Ain Shams University, Cairo, Egypt. ⁹Immunology & Immunology Unit, Cancer Biotechnology Department, National Cancer Institute (NCI), Cairo University, Giza, Egypt. ¹⁰Molecular Genetic Unit (MAGU), Molecular Genetic Unit (MAGU), Faculty of Science, Cairo University, Giza 12613, Egypt. ¹¹Surgical Oncology Department, Mataria Teaching Hospital, Cairo, Egypt. ¹²Nanotechnology Research Center, British University in Egypt (BUE), Cairo, Egypt.

Background: The incidence of breast cancer (BC) has substantially increased among women younger than 50. Due to fragile economic situation in the middle east and lack of awareness, BC women are characterized by late diagnosis and thus, there is an urgent need for a cheap early prognostic tool. BC progression involves several genetic mutations via activating oncogenes or disrupting the functions of tumor suppressor genes, such as *BRCA1*, *BRCA2* and *P53*. Mutation in these genes are associated with an increased risk of breast cancer and thereof, can be used as prognostic markers. High throughput technologies such as next generation sequencing (NGS) with help of different bioinformatic analysis tools give massive data about deleterious mutations in tumor suppressor genes. Therefore, in this study we aimed to establish High Resolution Melting (HRM) technique as an economic prognostic tool for identifying deleterious mutations in *BRCA1*, *BRCA2* and *P53* genes amongst familial and non-familial breast cancer patients.

Methods&Patients: Forty-eight breast cancer patients (15 Familial and 33 non-familial) and 2 healthy volunteers were enrolled in the present study. Genomic DNA was extracted from breast cancer tissues and screened using NGS to identify types of mutations in both *BRCA1* and *BRCA2* genes. All positive samples were screened for presence of mutations in *BRCA1* (exon 19), *BRCA2* (exon 11F) and *P53* (exon 5) using HRM. All samples were analyzed for identifying types of mutations using sanger sequencing.

Results: Our results identified 57 different mutations in the three genes. Deleterious mutations are identified as follows: 13 frameshift (c.5345delA (36.3%), c.5321delC (36%), c.5337delA (27.2%)) and 8 non-synonymous/misense mutations (c. T5320C (36.3%), c. T5330W(A/T) (27.2%)) in *BRCA1* (Exon 19), 6 frameshift mutations (c.3528delA (27.2%)), 13 non-synonymous/misense mutations (c. T3840G (72.7%), c. G13839G(G/T) (27.2%)) and 6 synonyous/silent mutations (c. A3895R (A/G) (45.4%)) in *BRCA2* (exon 11F). Regarding *P53* (exon 5), 10 frameshift mutations (c.813insC (65.6%)) were detected. Additionally, some of the sequences were sent to GenBank and obtained the following accession numbers: (OL512955 and OL512956 for *BRCA1* (exon 19) and OL512957 for *BRCA2* (exon 11)). Moreover, mutations in the three high penetrance genes, *BRCA1*, *BRCA2* and *P53* were correlated with some clinical parameters and results showed that young age and family history were the most prominent ones.

Table 1: Frequency of most common mutations in the selected exons of BRCA1, BRCA2 and P53 genes in breast cancer patients

Gene/Exon	Number of Mutations	Mutation Type	Nucleotide Change	AA Change	HRM Change	Pathogenicity
BRCA1 Exon 19	13	Frameshift	c.5321delC	p.L1438del	Missing	Probably Disrupting
	13	Frameshift	c.5337delA	p.L1443del	Missing	Probably Disrupting
	8	Non-synonymous/misense	c. T5320C	p.L1438P	Missing	Probably Disrupting
BRCA2 Exon 11F	6	Frameshift	c.3528delA	p.R1176del	Missing	Probably Disrupting
	13	Non-synonymous/misense	c. T3840G	p.R1280G	Missing	Probably Disrupting
	6	Synonyous/silent	c. A3895R	p.R1298R	Missing	Probably Disrupting
P53 Exon 5	10	Frameshift	c.813insC	p.S271insP	Missing	Probably Disrupting
	7	Non-synonymous/misense	c. L858delG	p.L286del	Missing	Probably Disrupting

Figure 1: Represents the most common pathogenic mutations among *BRCA1*, *BRCA2* and *P53* genes. Where (A) Frameshift, (B) Insertions and (C) Non-synonymous mutation.

Conclusion: The present study successfully established HRM as an economic prognostic tool for identifying the presence of deleterious mutations in *BRCA1*, *BRCA2* and *P53* genes which will help correlate the presence of mutations on other affected genes which present with other risk factors as prognostic tool in BC women.

Acknowledgment: This project was funded by the Science and Technology Development Fund (STDF), Egypt Grant No. 2294.

Africa Health Exon Conference (Spring)

Twelve of our staff members and **ten** students have attended the First African Health Exon Conference as representatives of the faculty of Biotechnology. The event was held on 5th -7th of June, 2022 under the auspices and the presence of **President AbdelFatah El Sisi**. The conference provided educational opportunities through scientific sessions and workshops given by international experts in the Medical field.



Africa Health Exon Conference (Spring)



Africa Health Exon Conference (Spring)

Samples of staff attendees certificates for the Africa Health Exon Conference:

The image displays four sample attendance certificates for the Africa Health Exon Conference, held from 05-07 June 2022. Each certificate is issued by the Scientific Council of the Egyptian Medical Association (SCEMA) under the auspices of H.E. Abdel Fattah El-Sisi, President of the Arab Republic of Egypt. The certificates are awarded to staff attendees: Mohamed Zid, Gehan Hammad, Shaza Ahmed, and Yara Ahmed. Each certificate includes a list of medical specialties and the number of credit hours earned in each, totaling 15 credit hours per attendee.

Certificate 1: Mohamed Zid

Certificate 2: Gehan Hammad

Certificate 3: Shaza Ahmed

Certificate 4: Yara Ahmed

General Information for all certificates:

UNDER THE AUSPICES OF H.E. **ABDEL FATTAH EL-SISI**
PRESIDENT OF THE ARAB REPUBLIC OF EGYPT

05 - 07 JUNE 2022
AFRCAM@MEDCON.COM

ENDORSED BY: SCIENTIFIC MATERIAL BY

THE SCIENTIFIC COUNCIL OF EGYPTIAN MEDICAL ASSOCIATION (SCEMA) DESIGNATES THIS LIVE ACTIVITY FOR A MAXIMUM OF NUMBER OF CREDIT HOURS (ACCORDING TO SUBSPECIALTY ATTENDED):

CARDIO THORACIC SURGERY	0.5	EXHIBITION OF AH	0.5	NEPHROLOGY	0.5	RADIOLOGY	1.0
CARDIOLOGY	1.0	DIET	0.5	NEUROLOGY	0.5	UROLOGY	0.5
PANDEMIC 19 COVID	0.5	HEALTHCARE LEADERSHIP	0.5	ONCOLOGY	0.5	OBSTETRICS	0.5
GERIATRY	0.5	HEALTHCARE LEADERSHIP	0.5	OPHTHALMOLOGY	0.5	WOMEN & CHILD	1.0
DERMATOLOGY	0.5	LABORATORIES	0.5	ORTHOPEDICS	0.5		
DIABETES	0.5	MEDICAL EDUCATION	0.5	PLASTIC SURGERY	0.5		
ENT	0.5	MENTAL HEALTH	0.5	PUBLIC HEALTH	0.5		

GENERAL DR. BAHAA EL-DIN ZIDAN
CONFERENCE CHAIRMAN

PROF. ADEL ADAWY
PRESIDENT OF THE EGYPTIAN MEDICAL ASSOCIATION

Africa Health Exon Conference (Spring)

A **Medical poster** was presented in the **Africa Health Exon Conference** by one of our staff members **Dr. Hossam Taha** and alumni **Gehad Koura**. The poster briefed the **graduation project topic** of our alumni Gehad koura; under the topic of **Human Cytomegalovirus: Genetic Polymorphism of UL97 Gene among Egyptian Breast Cancer Patients**

Human Cytomegalovirus: Genetic Polymorphism of UL97 gene among Egyptian Breast Cancer Patients
 Gehad Atef Korrah^{1,2,3}, Aya Ali El-Sharkawy⁴, Mohamed El-Shinawi^{4,5}, Mona Mostafa Mohamed^{4,6}, and Hossam Taha Mohamed^{4,2}

¹Zoology Department, Faculty of Science, Cairo University, Egypt. ²Faculty of Biotechnology, October University for Modern Sciences and Arts, Egypt. ³Egypt Center for Research and Regenerative Medicine, ⁴Faculty of Medicine, Ain Shams University, Egypt. ⁵Vice President for International Affairs, Galala University, Egypt. ⁶Faculty of Science, Galala University, Egypt.

Background:
Breast cancer is the most prevalent cancer among women in Egypt. Inflammatory breast cancer (IBC) is the most lethal form of breast cancer and is characterized by a low survival rate. Many previous studies revealed a positive correlation between the incidence of viral infections and disease progression. Human cytomegalovirus is an oncomodulatory virus associated with many types of cancer including breast cancer. Mutations in the human CMV UL97 kinase gene are a major mechanism of viral resistance to two anti-CMV drugs, ganciclovir (GCV) and maribavir (MBV). GCV, is the most widely used and established therapy for HCMV.

Aim:
The aim of the present study is to determine the incidence of HCMV-DNA in the cancer tissue of IBC and non-IBC patients. In addition, analysis of the frequency of UL97 genetic polymorphism.

Methods:

Collection of 30 tissue samples

DNA extraction

↓

Genotyping of UL97 by PCR-RFLP

Nested PCR

↓

Agarose gel electrophoresis

Statistical Analysis

Results:

1. Clinical and pathological characterization of breast cancer patients.

Characteristic	IBC (N = 17)	Non-IBC (N = 13)	P-value
Age [year]			
Range	31-67	36-62	
Mean ±SD	48.82 ±12.6	48.3 ±9.2	0.142 ^a
Tumor Size [cm]			
Mean ±SD	6.7 ±3	2.9 ±1.3	
≤4	2 (11.8%)	6 (46.2%)	0.045 ^b
>4	15 (88.2%)	7 (53.8%)	
Tumor grade			
G1	0 (04.5%)	4 (30.8%)	
G2	10 (58.8%)	9 (69.2%)	0.005 ^b
G3	7 (41.2%)	0 (0%)	
Number of metastatic lymph nodes			
Mean ±SD	6.5 ±3.8	2.7 ±1.5	0.001 ^a
Lymphovascular invasion			
Negative	11 (64.7%)	11 (84.6%)	
Positive	6 (35.3%)	2 (15.4%)	0.212 ^b

Data are reported as means ±SD
^a Student's t-test.
^b Chi square test.
^{*} Significant p value (p < 0.05)

2. IBC patients are characterized by a high incidence of HCMV DNA compared to non-IBC patients.

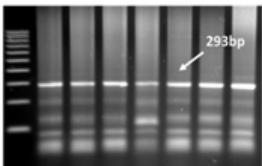


Figure 1. Agarose gel showed positive HCMV-DNA nested PCR amplicon (293-bp).

3. HCMV⁺ IBC patients are characterized by a high incidence of mutant UL97 gene compared to non-IBC.

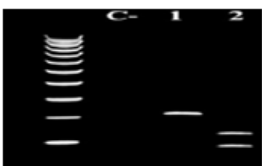


Figure 2. Agarose gel showed RFLP PCR results. The bands were cut which indicated a mutation in the UL97 gene.

Conclusion:
IBC patients are characterized by large tumor size, high tumor grade, and a high number of metastatic lymph nodes. IBC cancer tissues were characterized by a high incidence of HCMV-DNA compared to non-IBC cancer tissues. Moreover, HCMV+ IBC cancer tissues showed a high incidence of mutant UL97 compared to non-IBC cancer tissues reflecting that IBC cancer tissues carry more GCV resistant strains of HCMV.

UN Climate Change Conference 2022 (Spring)

Reem Hatem ElHady, a graduate from the faculty of Biotechnology, and member of staff has received an acceptance to present her graduation project at the European Universities in Egypt's (EUE) conference 'Effects of Climate change on sustainability: the road to COP27'. This conference brings light to the grand occasion of the **UN Climate Change Conference 2022** (UNFCCC COP27) in Sharm El-Sheikh, which will be in November from the 7th-18th, 2022.



Faculty Training & Workshops

Trainings are a fundamental tool used in the Faculty of Biotechnology. The training programs provided allows students to develop areas that suit their particular needs. During our trainings, attendees have the opportunity to interact with different personnel from diverse organizations and industries. These diverse perspectives allow students to explore innovative approaches to solve common issues.

The variety of trainings offered permits learning, developing and interacting without the distractions of the everyday student duties. The following are a list for some of the accommodating hosts that we sent our students to and planning to add more venues for the upcoming year.



Total no. of trainings **(10)**

Total no. of students trained **(526)**

Total no. of staff trained **(30)**

Faculty Training & Workshops



Medical & Pharmaceutical Biotechnology

- 57357
- Greenwich University
- Global Medical Labs
- Biotech village in Abu Dhabi



Agricultural/ Environmental Biotechnology

- AGERI
- Central Laboratory
- Delta Aromatics
- Horticulture Institute
- Cairo University Research Park



Forensic & Nano-biotechnology

- Nanobiotechnology , Beni-Suef Uni
- Egyptian Centre for Research & Security Studies

Students' Trainings

526 students at the faculty from all levels had the privilege of taking part in miscellaneous training courses both on and off campus. Some of the training sessions were offered in the most pristine research institutes and organizations and have involved hands-on training and activities for the students.

- **183 students** completed their training at **Medical Global Labs**.
- **155 students** had their **DNA Forensics Workshop** which was held on campus which given by the **military of defense**.
- **158 students** had their training which was held in **Plant tissue culture** .
- **30 students** had their training which was held at **Creative Egyptian Biotechnologists (CEB)**.

Examples from students' trainings at Creative Egyptian Biotechnologists (CEB)



The role of DNA in criminal crimes and national security

Forensics Workshop (Fall)

An advanced training course and workshop organized by the Faculty of Biotechnology in fruitful cooperation with the **National Defense College - Nasser Higher Military Academy at the Ministry of Defense. 155 students** received training, and the course was inaugurated in the presence and honor of **General Tamer Shousha**, Director of the National Defense College.



Forensics Workshop (Fall)

The course dealt with various lectures on crime scene sciences, types of fingerprints and the role of DNA in detecting the perpetrators of the crime, and Other lectures honored by a number of doctors and consultants specialized in criminology, followed by various lectures on national security, including; Western plans to divide the Arab region, Smart power and its impact on Egyptian national security, Artificial intelligence and its impact on national security, Fourth and fifth generation wars and Egyptian water security and the role of social media in detecting crime and influencing public opinion.

The training concluded with a ceremony honoring the students and distributing the certificates, where **General Tamer Shousha** honored by handing over the certificates to the students who received the training In the presence of **Prof. Ayman Diab**, Dean of the faculty of Biotechnology, and **Dr. Gehan Safwat**, Vice Dean for Student Affairs.

The training was attended by **General Ayman Hashish Musharraf Al-Darwa** from the National Defense College and Brigadier **General Hossam Atef Musharraf**, a course on the use of DNA in criminal crimes.

As well as some of the participated college lecturers, **Dr. Adel Al-Bari**, Director of Forensic Medicine in Suez and South Sinai, **General Dr. Iman El-Sherbiny**, Professor of Crime Theater at the Police College, writer **Dr. Engy El-Husseini**, **Dr. Moqaddam Amani Abdel-Maqsoud**, **Dr. Amani Abdel-Hakim**, **Dr. Ghada Amer**, **Dr. Alaa Fawzy**, and **Counselor Mahmoud Ziyad**. All appreciation goes to **General Dr. Osama Al-Jammal**, **Staff Brigade Samir Badawi** and **Staff Brigadier General Ihab Talaat**.



Staff Capacity Building

To proceed with the faculty of Biotechnology's initiative in building and rehabilitating, The Faculty of biotechnology is keen on enhancing the academic and administrative staff's engagement in a meaningful teaching-learning process and research. In order to bring about; dynamic teaching-learning process, vibrant and problem-solving research culture, efficient and innovative administrative service provision, ethics and good governance as well as conducive intellectual atmosphere in the university.

Through providing short-term trainings geared towards improving the research capacity of academic and administrative staff by putting special emphasis on: introducing less common research designs and methods, arranging trainings on the use of research-related software, and arranging workshops on academic writing skills. Also, by encouraging and facilitating the meaningful use of available studies, and working towards the establishment of the culture of institutional research.

Arranging short-term trainings and forums for exchange of ideas to improve the teaching and mentoring skills of the academic staff by giving specific attention to; active-learning models, effective mentoring of graduate students, enrichment and improvisation curricula to achieve depth

and permanence in learning and engagement in reflective practice.

Professor Amr Ageez conducted practical sessions for **12** of the **assisting staff**

Professor Ahmed Nada conducted course constructive alignment workshop for the newly hired professors.

Dr. Amgad Rady conducted an e-learning workshop for the newly hired professors.

Dr. Samer El-Sayed conducted an e-learning workshop for the newly hired assisting staff.

Professor Amr Ageez conducted an exam preparation session for all professors.

Dr. Hossam Taha conducted a training for diagnosis team. The training include: Tetra ARMS PCR, ARMS PCR, RFLP PCR Real-time PCR, Agarose gel electrophoresis, general knowledge about flow cytometry. Training was attended by **L.A Shaza Ahmed, L.A Gehan Hammad, L.A. Sandra Habib, L.A Dalia Hesham, L.A Ehab Ahmed, T.A Noora Essam, T.A. Nada ElGazzar** and **T.A Sara Badawi**.





Staff achievements & PG- Certificates

Staff Achievements

The Lecturer Assistant

Dalia Hesham has been selected as a short term **PhD fellow by the ICGEB** Cancer Genomics Group under the supervision of Dr. Luiz Zerbini, and will be working on the Metabolic profiling of Hepatocellular Carcinoma in HBV-positive patients **in South Africa.**



Staff Achievements

Dr. Hossam Taha and L.A. Shaza Habib awarded a certificate of participation accredited by the AACR for Continuing Medical Education (ACCME) at the live activity titled "AACR Annual Meeting 2022" from April 8th to 13th, 2022 held by the American Association for Cancer Research.



PG –Certificates



PG-Cert in HE
acheivers

Dr. Osama Saad
Prof. Ahmed Nada
Dr. Ashraf Bakkar
Dr. Reham Mohsen
Dr. Amgad Rady
Dr. Hossam Taha
L.A. Gihan Hammad



PG-Cert in HE
current

Dr. Haydan Mostafa
Dr. Yasmin Abdel Latif
L.A. Shaza Ahmed
L.A. Fouad Ashry
T.A. Mohamed Mansour
T.A. Noura Mohamed



Collaborative Agreements

The Faculty of Biotechnology have signed various collaborative agreements with different foundations and laboratories to enhance the educational process for the students and alumni. For the year 2021-2022 collaborative agreements have been signed with the following institutes:

1. Creative Egyptian Biotechnologists (CEB)
2. Helwan university
3. Agri lab
4. Nanogate
5. Baheya Foundation
6. Egyptian Petroleum Research Institute
7. Cell Safe Cord Blood Bank
8. Global Labs
9. Nawah Scientific Center
10. Plasma
11. Cellula
12. Cellena Scientific Cairo Gene
13. Nanofab Technology

Collaborative agreement with Creative Egyptian Biotechnologists (CEB)

Due to the implementation of the strategic plan and future vision in employing our graduates in major local and international companies, and providing advanced training opportunities for our students in addition to implementing joint activities in the university research and management consultancy, the Faculty of Biotechnology signed a collaborative agreement with Creative Egyptian Biotechnologists (CEB) academy stating the following:

- Academic and research cooperation.
- Providing laboratory and research services and all equipment and laboratory capabilities required to conduct research projects, workshops or training courses.
- Providing jobs to work in research laboratories



Collaborative agreement with Helwan University

The faculty of Biotechnology signed a collaborative agreement with Helwan University to implement the following services for our students;

- Exchange of technical information and scientific visits. - Organizing seminars, conferences and workshops in various scientific and research fields
- Training students in service centers and specialized laboratories on both sides and implementing graduation projects
- Cooperation in the areas of applications of modern sciences and biotechnology



Collaborative agreement with Agri Lab

The Faculty of Biotechnology signed a collaborative agreement with Agri Lab, which provides various chemical and microbiological analysis services to all sectors interested in food and food processing as well as sectors interested in food quality and safety.

- Academic and research cooperation
- Providing laboratory and research services and all equipment and laboratory capabilities required to conduct research projects, workshops or training courses.
- Providing jobs to work in research laboratories



Collaborative agreement with Nano-Gate

The Faculty of Biotechnology signed a collaborative agreement with Nano-Gate company, a well-established company focused on research and development in the field of nanotechnology providing scientific training and workshops, offering job opportunities in research laboratories and collaboration on research projects.



Collaborative agreement with Baheya Foundation

The Faculty of Biotechnology signed a collaborative agreement with Baheya Foundation to conduct students graduation projects in various laboratory disciplines such as clinical chemistry, immunology, hormones, microbiological, hematological and molecular biology analyzes. Also, providing job opportunities in research laboratories and inviting university students and members to attend conferences, seminars and workshops.



Collaborative agreement with Egyption Petroleum Research Institute

The Faculty of Biotechnology signed a collaborative agreement with Egyptian Petroleum Research Institute to implement the following services for our students;

- Exchange of technical information and scientific visits.
- Organizing seminars, conferences and workshops in various scientific and research fields.
- Training students in service centers and specialized laboratories on both sides and implementing graduation projects.
- Cooperation in the areas of applications of modern sciences and biotechnology.



Collaborative agreement with Cell Safe Cord Blood Bank

The Faculty of Biotechnology signed a collaborative agreement with Cell Safe Cord Blood Bank, the first stem cell bank in Egypt and the Middle East which provides academic and research cooperation, providing laboratory and research services and all equipment and laboratory capabilities required to conduct research projects, workshops or training courses and Providing jobs to work in research laboratories.



Collaborative agreement with Global Labs

The Faculty of Biotechnology signed a collaborative agreement with Global Labs specialized in advanced medical research which provides academic and research cooperation, Providing laboratory and research services and all equipment and laboratory capabilities required to conduct research projects, workshops or training courses and Providing jobs to work in research laboratories.



Collaborative agreement with Nawah Scientific Center

The Faculty of Biotechnology signed a collaborative agreement with Nawah Scientific Center, which is specialized in complementary scientific research stating the following:

- Promoting the degree of scientific cooperation
- Committed to diligence in applying for scientific projects and joint research grants by preparing high-level scientific projects capable of competition.
- Nawah offer discounts to members of the Faculty of Biotechnology at October University for Modern Sciences and Arts, from students and faculty members.



Collaborative agreement with Plasma

The Faculty of Biotechnology signed a collaborative agreement with Plasma, which specializes in training in scientific fields specialized in biotechnology in its various branches, applications and medical analyzes.



Collaborative agreement with Cellula Group

The Faculty of Biotechnology signed a collaborative agreement with Cellula Group, which specializes in biotechnology laboratories, research and medical analysis.



Collaborative agreement with Cellena Scientific and Cairo Gene

The Faculty of Biotechnology signed a collaborative agreement with Cellena Scientific, which specializes in training on various biotechnology applications and also provides academic and research cooperation, providing laboratory and research services and all equipment and laboratory capabilities required to conduct research projects, workshops or training courses and Providing jobs to work in research laboratories.



Collaborative agreement with Nanofab Technology

The Faculty of Biotechnology signed a collaborative agreement with Nanofab Technology, which is a leading manufacturer of laboratory and industrial nanomaterials.

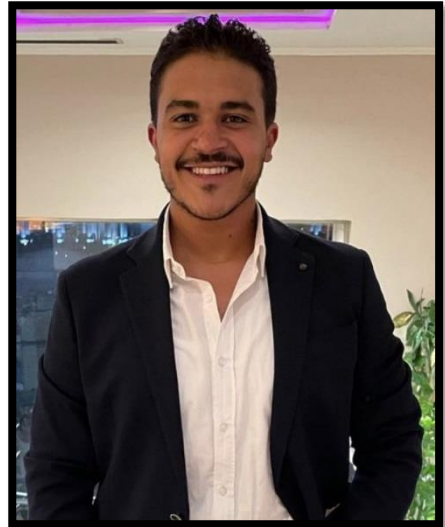




Alumni Activities

Alumni Achievements

Our alumnus, Mohamed Shokry got his M.Sc in Biomedical Science from University of Science and Technology at Zewail city.



Our alumnus, Mahmoud Gamal gave a session on the 9th of May 2022 titled "Scientific Research and Clinical Trials" at Badr University in Cairo.

Our alumnus, Natalie Tamer has been working as a project coordinator at CARES, coordinating EU co-funded projects, including DeVilag and SureMap. Also, she is a program coordinator for the newly developed Water, Energy, and Food technologies professional diploma at the American University in Cairo (AUC).



Our alumnus, Mohamed Ashraf presented his graduation projects' research titled "The Concurrent Therapeutic Potential of Adipose-Derived Mesenchymal Stem Cells on Gentamycin-Induced Hepatorenal Toxicity in Wistar Rats" at "the 29th International Student Congress of Biomedical Sciences (ISCO)" at Groningen University, Netherlands.

Representative Alumni at Africa Health Excon Conference

The alumni of the faculty of Biotechnology stood tall at the Africa Health Excon conference which was held on 5th -7th of June, 2022 under the auspices and the presence of **President AbdelFatah El Sisi**. They have attended as **representatives in booths** for prominent companies such as Abbott, Clinilab, Global Technology, and HVD Life Sciences.



Our alumnus, Omar Hassan: Product Manager at Abbot. Who also started a start-up project using “coffee ground to produce recycled products” such as recyclable coffee cups that can be further used as fertilizers.

Representative Alumni at Africa Health Exon Conference

Our alumnus, Mohamed El Beltagy: Application Specialist at Global Technology.



Our alumnus, Mahmoud Gamal: Qiagen life sciences section head.

Representative Alumni at Africa Health Exon Conference

Our alumnus, May Mostafa:
Technical Support at HVD.



Our alumnus, Omar Khaled:
Marketing coordinator at
ESAG PHARMA.

Selected Alumnus Job examples for the year 2021-2022	
Alumni	Job
Mohamed Kamal	Quality Control Microbiologist- GSK
Omar Mohamed	Ingene - Nutrigenomics education and awareness specialist
Rammez Mitry	Energetics Egypt
Mohamed Salah	Maddox Pharmswiss Egypt
Sara Farouk	Novell Pharma
Mohamed Shokry	Centre of Scientific Excellence for Food Research ana Analysis, Zewail City
Abdelrahman Ahmed	Quality Control Specialist at Edita Egypt
Eslam Arafa	Allergan Medical Institute
Merna Mohamed	Chemist at As-Salam International Hospital
Nouran Amr	Chemist at Integrated Diagnostics Holdings
Ahmed Mourad	Microbiologist at U Pharma
Abdelrahman Sayed	Medical Saless Representative at Wester Pharmaceutical Industries
Omar El-Sherif	Quality Control Specialist at SEDICO Pharmaceutical



26 July Mehwar Road Intersection with Wahat Road, 6th of October
Cairo, Egypt



Tel.: 3837-1516 Tel.: 3837-1523
Fax: (+202) 3837 1543



info@msa.eun.eg admission@msa.eun.eg

