



FACULTY OF  
BIOTECHNOLOGY

# ACHIEVEMENTS YEARBOOK



2017-2018



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## Dean's welcome:



**Prof. Ayman Diab**

Dean of faculty of  
Biotechnology

**Welcome to Faculty of Biotechnology** : With the ever changing world we live in, over the past decade, biotechnology has advanced much to the advantage of several fields and industries by altering the specifications desired to comply with our society's needs. Let me give you a comprehensive explanation at its simplest, biotechnology is technology based on biology; biotechnology harnesses cellular and biomolecular processes to develop technologies and products that help improve our lives and the health of our world. Many students and parents want to know why a person should pursue biotechnology; here are simple reasons to why one should consider applying to a biotechnology program. Today, companies are focused on their position in society and worldwide competition as they become more effective in production, they keep improving their products. Improved production results from technology progression. Biotechnology is a powerful tool of nature that is in human hand, with our depleting resources the food and agricultural industries will be dependent on the work in the biotechnology field to ensure that there will be enough food to go around and that no one will ever starve from hunger. Recent advances in biotechnology are helping us prepare for and meet society's most pressing challenges. Now why MSA's program you might ask; 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 well-being of society. We offer diverse syllabuses that nurture creative thinking and prepare students for productive and rewarding careers. Our undergraduate school program 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 on a national scale and abroad, honors program for a master's scholarship, extracurricular activities, and participate in faculty research. Our talented students will make significant contributes in diverse professional sectors in the future. Together, we look forward to discovering exciting new phenomena, unraveling challenging problem in biology and biotechnology, and finding applications in imperative biological matter. Conclusively, we always welcome and encourage your interest in joining our faculty.

**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.**





## **1. Extracurricular Activities**

# Field Trips

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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 is the "Industrial Project" that project promotes a spectrum of benefits to the students. We intend to visit various sites as the ones mentioned in the following table.

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Field Trips

Total no. of field trips  
**(11)**

The **industrial projects** course is one of the most condense and demanding courses for the spring, 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 for the students to have a chance to get acquaintance with the miscellaneous industrial processes and organizations in the effort of deriving inspiration for a biotechnological venture aimed at solving any industrial challenge or improving any pre-existing commercial products.

### “Kemico”

As part of “**Industrial project course**”, the students of the faculty of Biotechnology attended a visit to the Kuwaiti-Egyptian for Medical Industries Company (Kemico). >>



### “Wadi Food”

As part of “**Industrial project course**”, the students of faculty of biotechnology got to go on a field trip to Wadi food, a manufacturing company that specializes in miscallenous products such as olive oil, pickled products and many others. >>



**“Technological Dairy Unit, Faculty of Agriculture, Cairo University”**

As part of **“Industrial project course”**, The aim of the visit was first to get acquainted with the manufacturing processes of making cheese, custard, rice pudding and yogurt >>



**“ECARU”**

As part of **“Industrial project course”**, Students of faculty of biotechnology attended a field visit to the Solid wastes recycling company ECARU >>



**“57357 Children Cancer Hospital”**

The visit aimed at showing the different techniques used in the field of immunology. This visit was specifically arranged for the students of the **“Advanced Immunology” course** >>





## **“Kafr Al Sheikh University”**

The field trip was organized as part of the **“Nanotechnology elective course”**. The aim of the visit to the University was to view the latest technological and scientific advances and developments at the institute of nanotechnology



## **“Vaccine and Serum Veterinary Research Institute.”**

Organized as part of **“Biochemical engineering course”**. The students monitored the operation of different bioreactors for vaccine mass production.



## **“The Nanotechnology Laboratory of the Regional Center”**

As part of **“Nanotechnology course”**, the third level students of the faculty of Biotechnology attended a visit to The Nanotechnology Laboratory of the Regional Center for food and Feed at the Agricultural Research



# Guest Speakers

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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.

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Total no. of Guest speakers

**(12)**

**“Mr.Youssef Quadih”**

guest speaker, gave a lecture under the title of “Healthy mind, healthy body” as an activity of the **“Sports Nutrition”** elective course. Mr Quadih talked about how to motivate yourself in order to go into a fitness regime and a diet plan.



**“Dr. Ahmed Selim”**, a professor in clinical oncology at Ain Shams University, provided the students with a cohesive session on the development of tumour as an activity of **“Industrial projects course”**



**“Mr. Omar Agamawy”** from DNAFit laboratories provided a lecture as an activity for the elective course **“Sports Nutrition”**. He thoroughly talked about the concept and uses of DNAFit, Nutrigenetics.



**“Dr. Mohamed El Mansy”** a researcher at the National Research Institute, with a background supplemented from Oregon state university provided a lecture as part of activity of **“Industrial projects course”** entitled ‘Drug Discovery; from Design to Synthesis.



# Clubs

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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.

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Total no. of Clubs

**(14)**

Running this year

**(8)**

# Mental health awareness club

The Faculty of Biotechnology at MSA University is committed to serve our community and play a vital role in awareness. **Dr. Reham Mohsen** has successfully established health awareness club, where public health awareness club has been essential as it helps people avoid risk factors and gives a chance to be more familiar with diseases that can affect them or their beloved ones! It was successfully organized on 21<sup>st</sup> of April Spring, 2018 by **T.A Mohamed Mansour, T.A Abdel - Rahman Essam, T.A Shrouk Mohamed, T.A Hoda Raafat and T.A Howida Samir.**



## Journal club

Biotechnology Journal Club services the research needs of the learning community and granting access to many informational resources. **Dr. Amr Ageez** has organized 2 sessions first one on 23th of October fall 2017, which was hosted by Dr. Sameh Heikal (Post doc. researcher at University of California, Los Angeles). Second session of journal club, was held on 4th of May spring 2018. The session was hosted by **Dr. Hossam Taha**, postdoc from Reims University, France. His research was about the usage of vibrational spectroscopy (FTIR and Raman) to identify spectral signatures of glycosaminoglycans at the tissue level particularly in the extracellular matrix at the margin of melanoma and mammary tumors. The number of attendees was 150 students and they found the session very informative and useful. Successfully organized by **L.A Yara Ahmed and T.A Abdel Rahman Essam**



# Debate Club

The Debate Club is an activity that was established at the faculty with a purpose to train students and cultivate their argumentative skills. It is a fundamental tool for developing and maintaining democracy and open. The Club was organized on 26<sup>th</sup> of September, Fall 2017. It began with a presentation detailing all the rules and regulations that the students would follow what the club's aims were and how the session progress. Successfully orgnized by **L.A Gihan Hammad.**



# Science fiction and futurism club

The Faculty of Biotechnology believes that developing the imaginary skills are essential to prepare a generation has the ability to predict, dream, create and change the future . The Science fiction club was organized by **Dr. Ashraf Bakkar** as we provide the space for students to connect, share and exchange ideas giving them the opportunity to enjoy the semester with activities that bring out their inner talent, engage them with research and promote their mental skills. It was successfully organized on 6<sup>th</sup> December, Fall 2017 by **T.A Dalia Hesham, T.A Yousra Rashwan.**





# Bioinformatics Club

The faculty of Biotechnology held a session in fall 2017. The session was given by research assistant Mr. Ali Kishk who discussed several concepts into using computational structures for biological applications and systems biology methods in Malaria resistance. He denoted several vital pieces into how different data sets may be used for pharmacogenetics purposes, for determination of similarity or common ancestry (phylogeny) and prediction of drugs...etc. The process was highly engaging. Organized by **L.A Moustafa Ahmed** and **L.A Fouad Ashry**



# Computational Biology Club

Biotechnology faculty organized bioinformatics event including three sessions in fall 2017, the students took in the 1<sup>st</sup> session "basics and applications of bioinformatics", in the 2<sup>nd</sup> session, "the application of bioinformatics in prediction the effect of point mutation on protein stability", and the 3<sup>rd</sup> and last session was titled "Beyond Bioinformatics". The event was very informative and the students were enthusiastic to know more about this amazing and important branch of science 'Bioinformatics'. Successfully organized by **Dr. Ahmed Gomaa, L.A Fouad Ashry, T.A Mostafa Ahmed.**



# Craftology Club

The Faculty of Biotechnology, MSA University, has organized under the supervision of **Dr. Samer Ismail** on the 29<sup>th</sup> of April, Spring 2018, "Craftology Entrepreneurship Club" a joint workshop titled the "Innovation Camp". A large number of students from the Faculty of Biotechnology participated in the "I Camp" workshop that was generously hosted by INJAZ Egypt, a pro-entrepreneurship NGO based in Maadi.

In the "I Camp", students identified the basics of entrepreneurship and innovation, in addition to employing these tools in problem solving. Then they practiced these techniques and analyzed some of the community problems in groups. Each group chose one of the community problems and applied the business model on them to develop a solution in the form of a service or product. The club was organized by **L.A Fouad Ashry, T.A Abdel-Rahman El Gammal, T.A Mariam Galal and T.A Omnia Bassam.**



## Book club

The book club is the series of events that we and the students discuss selected books or novels to read, discuss and criticize, the event of book club on Monday October 16, 2017 and for second time on 4<sup>th</sup> of May, Spring 2018, the students selected the most popular internationally book ."The Seven Habits of Highly Effective People" for Dr. Steven Covey, this book is related to personal and self-development and it is one of the most seller books in the world. The Club was successfully organized by **L.A Fouad Ashry**.





## **2. Research publications**

# Research Publications

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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.

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Total no. of  
publications

**(11)**

# Students & Staff research publications

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## 2018

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(1) Emtithal  
AbdelSamie

Israa Elkafrawy

Mai Osama

Amr Ageez

Abd-El-Samie, E. M., **Elkafrawy, I., Osama, M., & Ageez, A.** (2018). Molecular phylogeny and identification of the Egyptian wasps (Hymenoptera: Vespidae) based on COI mitochondrial gene sequences. *Egyptian Journal of Biological Pest Control*, 28(1). doi:10.1186/s41938-018-0038-z

**Source: Scopus**

**Impact factor: 0.18**

(2) Christina  
Fawzy

Ashraf Bakkar

Aly Fahmy

**Ghaly, C. A., Bakaar, A., & Mohamed, A. F.** (2018). Invitro assessment of anticancer activity of shrimp derived chitosan and related apoptotic profile alteration. *Journal of the Egyptian Society of Parasitology*, 48(2), 379-388.

**Source: Scopus**

**Impact factor: 0.18**

(3)Natasa Majcen

Reham Mohsen

Martin Snowdin

John Mitchell

Bojana Voncina

Majcen, N., **Mohsen, R.,** Snowden, M. J., Mitchell, J. C., & Voncina, B. (2018). The development of a novel smart material based on colloidal microgels and cotton. *Advances in Colloid and Interface Science*, 256, 193-202. doi:10.1016/j.cis.2018.04.005.

**Source: Scopus**

**Impact factor: 7.77**

4) Hossam El Beltagy

Heba Mohamed

Basma Megahed

Mohamed Gamal

Gehan Safwat

El Beltagy, H. S., Mohamed, H. I., **Megahed, B. M., Gamal, M., & Safwat, G.** (2018). Evaluation of some chemical constituents, antioxidant, antibacterial, anticancer activities of BETA VULGARIS L. root. *Fresenius Environmental Bulletin*

**Source: Scopus**

**Impact factor: 0.36**

5) Gehan Safwat

Manal Mortady

Hamed

Aseel Talaat Helmy

**Safwat, G., Hamed, M. M., & Helmy, T. A.** (2018). The biological activity of CONOCARPUS ERECTUS extracts and their applications as cytotoxic agents. *Pharmacologyonline*, 2, 14-49.

**Source: Scopus**

**Impact factor: 0.37**

6) Amr Abdel Wahid

Mohmed Maged

Aly Fahmy

**Abdel Wahid, A. A., Maged, M., & Mohamed, A. F.** (2018). Evaluation of SCARABEAUS SACER derived-Chitosan, anticancer potentials and related changes in vitro study. *Journal of the Egyptian Society of Parasitology*, 48, 453-458.

**Source: Scopus**

**Impact factor: 0.18**

7) Mazen Ashraf

Sahar Youssef

Gehan Safwat

A. Shalaby

**Ismail, M. A., Youssef, S. A., Safwat, G., & Shalaby, A. A.** (2018). Effect of some modifications in tissue culture media for banana commercial multiplication. *Acta horticulturae*

**Source: Scopus**

**Impact factor: 0.17**

8) Ayman Samy

Reham Mohsen

Aly Fahmy

**Samy, A., Mohsen, R., & Mohamed, A. F.** (2018). Evaluation of anti-cancer potential of 5-Fluorouracil and doxorubicin against prostate and lung cancer cell lines and related apoptotic alterations. *International Journal of Scientific and Engineering Research*.

**Source: ResearchGate**

**Impact factor: 0.18**



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## 2017

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(1) Ayman Diab  
Maimona Kord  
Amaal Maghraby

**Ayman A. Diab**, Maimona A. Kord, Amaal H.S. Maghraby (2017). In Silico mapping of some genes responsible for abiotic stress tolerance in cereals. *Research Journal of Pharmaceutical, Biological and Chemical Sciences*. 8(2) 1621-1645

**Source: Research Gate**

**Impact factor: 0.25**

(2) Samah Mamdouh

Fatma Khorshed  
Tarek Aboushousha  
Hussam Hamdy  
Ayman Diab  
Mohamed Seleem  
Mohamed Saber

Samah Mamdouh, Fatma Khorshed, Tarek Aboushousha, Hussam Hamdy, **Ayman Diab**. Mohamed Seleem, Mohamed Saber. (2017). Evaluation of Mir-224, Mir-215 and Mir-143 as Serum Biomarkers for HCV Associated Hepatocellular Carcinoma. *Asian Pacific Journal of Cancer Prevention* 18: 3167-3171

**Source: Scopus**

**Impact factor: 2.39**

(3) Kamal Magdy

Amgad Rady  
Lamia Ryad  
Nermine Gad

**Kamal, K. M., Rady, A. M., Ryad, L., & Gad, N.** (2017). Validation for simultaneous determination of tetracycline by using QuEChERS method and LC-MS/MS in liver of buffalo. *New York Science Journal*, 10(6), 111-114. doi:10.7537/marsnys100617.15.

**Source: N/A**

**Impact factor: 0.6**

(4)Amr Ageez  
Mostafa Sayed

**Aboushousha, T. S., Zawi, M. S. and Ageez, A. M.** (2017). Differential Expression of EGFR in Primary Tumor and Lymph Node Deposits of Breast Carcinoma. *International Journal of Scientific & Engineering Research*, 8(12).

**Source: ResearchGate**

**Impact factor: 0.18**

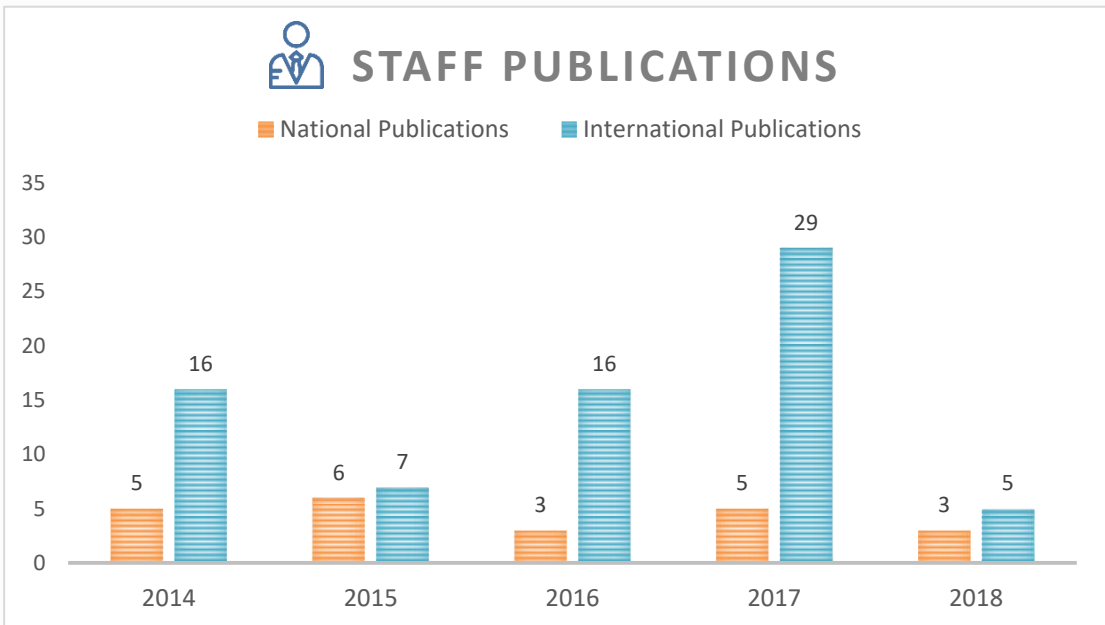
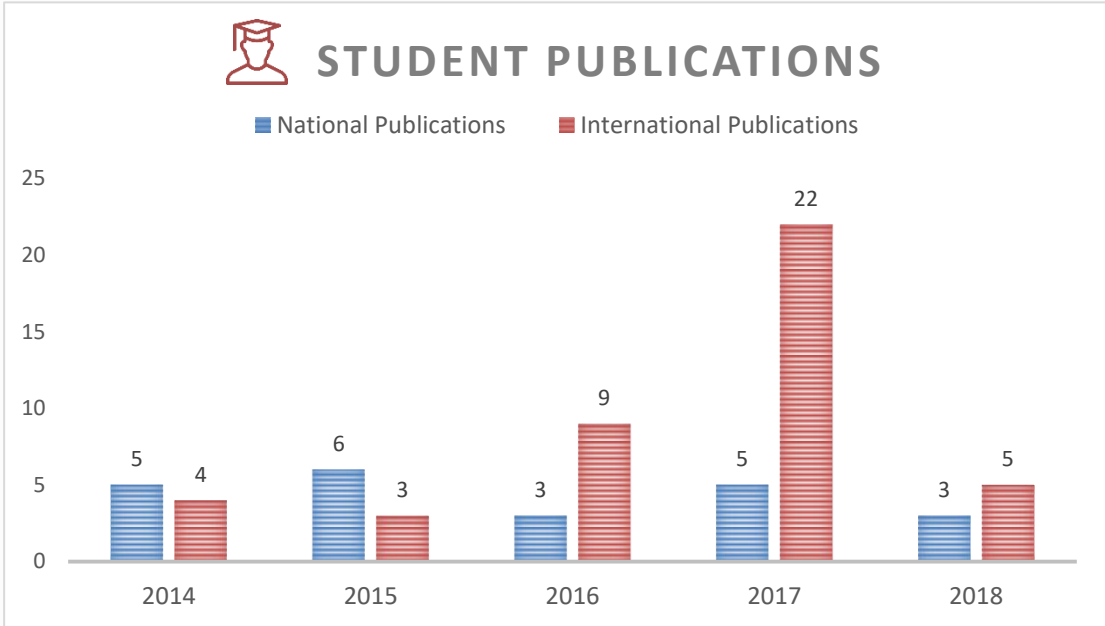
(5)Caroline Ashraf  
Tarek Aboushousha  
Ashraf Bakkar

**Ashraf, C., Aboushousha, T. and Bakkar, A.** (2017). OCT4 Expression in HCV-Related Hepatocellular Carcinoma. *International Journal of Scientific & Engineering Research*, 4(12).

**Source: Research Gate**

**Impact factor: 0.18**

# Staff and Students Publications





### **3. Students and Staff Awards**

# Students & Staff Awards

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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 they have always received high praise and even been awarded several placements.

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Total no.

**(2)** Students awarded

**(1)** Staff awarded

# Students' awards

## Sole Competition

**Eight** of Biotechnology students participated in Science Operations Leaders in Egypt "SOLE" in the Conference Center of Medicine at Cairo University. Two students, **Natalie Tamer** and **Ahmed Tawfik**, were awarded for getting the first award place in SOLE.

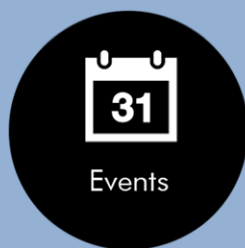
SOLE is an annual competition where it gathers students from various universities to compete by examining their knowledge about the different fields of Biotechnology.



# Staff awards

One of our esteemed staff members '**Dr. Ashraf Bakkar**' , associate professor received a '**Certificate of Reviewing**' from the international journal '**Cancer Letters**' for his reviewing efforts for the journal.





## **4. Academic events**



# Biotechnology Horizons 2050

**Dr. Osama Saad** organized the conference that aimed at dispersing some of the advances made in genome analysis with the hope of enlightening young scientists of some of the theories and research done by their peers and professionals in the field.

In addition, the students discussed their web site designs and projects around different aspects in genome analysis. During this fruitful gathering, alumni and external speakers presented their work and introduced their experience and recent research. The event was organized also by **L.A Gihan Hammad, L.A Hadi Shahin, T.A Abdel Rahman Essam and T.A Salma Effat and T.A Howida Samir**



# Awards Ceremony

The faculty of Biotechnology Students with the highest rankings were also awarded for their academic achievement. The faculty encouraged the students who were successfully out of academic probation by giving them a free voucher for an entrepreneurship workshop. The faculty did not forget the great efforts exerted by faculty's lab technicians especially Mr. Ahmed Abdel Mohdy and Ms. Doaa Farouk who were awarded as well. The event was also organized by **T.A Ali Mekki, T.A Mohamed Mansour, T.A Abdel Rahman Essam, T.A Sandra Habib and T.A Shrouk Mohamed and T.A Sandra Habib**



# Stem Cells workshop

The day entailed several activities including guest speakers and a practical session; the main theme portrayed the notion of encouraging participants to further their learning and development in the processes and applications of stem cells. It began with a welcome note from the faculty's programme leader; followed by a session from Prof. Mervat Eldftar a professor of tissue engineering from the National Cancer Institute (NCI) with a lecture entitled "The Applications of Stem Cells in Tissue Engineering". Then, a session was held by Prof. Wael Aboukheir, Professor of Immunology and Microbiology at the Military Medical Academy and the secretary general of the national stem cells society with a session entitled "The Clinical Application of Stem Cells", and a final session by Mr. Fayez Fouad, Tissue Engineering Specialist, entitled "The applications of Stem Cells in Biomedical Engineering". The event was organized by **L.A Gihan Hammad, L.A Fouad Ashry, T.A Dalia Hesham, and T.A Abdel Rahman El-Gammal**



# Biotechnology Exhibition

**Dr. Osama Saad** organized the biotechnology exhibition that aimed at acknowledging the versatile array of the fields of biotechnology, their advances, and applications, especially in Egypt. It was prepared as a part of the course "Introduction to Biotechnology". The exhibition provided the chance for the students to showcase their themed posters and engage with their peers and teaching staff in open discussions about various biotechnological fields. The event was organized by **L.A Gihan Hammad, L.A Suzan Ali, L.A Hady Shahin and L.A Hoda El Essawy**



# TICO Start-up Competition

**Prof. Ayman Diab** the dean of the faculty of Biotechnology and the manager of TICO office showcased the first "MSA TICO startup competition" during the exhibition on November, 2017. The Hub was open to those interested in learning about entrepreneurship and innovation as well as those who want to showcase their small businesses on the university grounds. The event was also successfully organized by **L.A Shaza Ahmed, L.A Hoda El Essawy, T.A Mohamed Mansour, and T.A Hoda Raafat**



# 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  
**(9)**

Student name	Achievement(s)
 <p><b>Mohamed Emad Mohamed Elsayed Hassan</b></p>	<p><b><u>Conference:</u></b>  <b>Research accepted in "International Conference on Cancer Research &amp; Targeted Therapy" and will be presented on 6 - 8 August 2018 at London, UK.</b></p>
 <p><b>Aya Ali Mohamed</b></p>	<p><b><u>Conference:</u></b>  <b>They were able to get a patent and an acceptance letter for an international conference in Washington D.C.</b></p>
 <p><b>Amr Abdelnasser Sayed Selim</b></p>	<p><b><u>Conference:</u></b>  <b>Poster Viewing in Immuno-Oncology 2018 Congress, taking place in Vienna, Austria from 25-26 June 2018.</b></p>
 <p><b>Khadiga Abdelnaser Amine</b></p>	<p><b><u>Conference:</u></b>  <b>Poster presentation at "2nd International Conference on Oncology and Radiology - ICOR" during September 17-19 at Rome, Italy.</b></p>
 <p><b>Aseel Talaat Helmy Othman Ali</b></p>	<p><b><u>Conference:</u></b>  <b>Poster Presentation at "World Congress on Pharmacology and Chemistry of Natural Compounds" scheduled during June 18-19, 2018 at Paris, France.</b></p>

Student name	Achievement(s)
 <p data-bbox="340 440 589 479"><b>Mazen Ashraf</b></p>	<p data-bbox="653 369 869 401"><b><u>Conference:</u></b></p> <p data-bbox="653 401 1277 627"><b>Abstract accepted micropropagation and in vitro techniques in turkey which is held under the supervision of international society of horticultural sciences.</b></p>
 <p data-bbox="333 716 583 755"><b>Amira Hassan</b></p>	<p data-bbox="653 639 869 672"><b><u>Conference:</u></b></p> <p data-bbox="653 672 1277 942"><b>Research accepted for poster presentation at "4<sup>th</sup> World Congress on Cancer Research &amp; Therapy-2018" under the track "Cancer Screening &amp; Diagnosis" during 13 – 15 August 2018 at Rome, Italy.</b></p>
 <p data-bbox="367 1025 569 1064"><b>Gehad Atef</b></p>	<p data-bbox="653 954 869 987"><b><u>Conference:</u></b></p> <p data-bbox="653 987 1277 1180"><b>Research accepted for poster presentation at "International Conference on Biotechnology" taking place on 25 – 27 October 2018 at Rome, Italy</b></p>



# Staff Conferences

**Dr. Mona Kamal** has been invited by ESEO to present the faculty as a guest speaker at "The Annual International Congress of the Egyptian Society and Endocrinology" and has received an invitation from the ESEO committee.



# Lectures & Seminars

From time to time the faculty invites Academic speakers from other institutions to discuss the different disciplines of science. This provides the chance for students to comprehend the opportunities, responsibilities and experience of the professional career in the spoken of field.

The **industrial project course** highlights their importance since it aims to inspire our thriving young scientists through the exposure of the expertise of the renowned speaker. The faculty intends to invite the following speakers to cover the stated topics mentioned in the following table



Total no. of Academic  
Visitors

**(12)**



Accommodated Academic Speaker	Topic/ Field
Mr. Youssef Qudaih	Sports Nutrition
Prof. Ahmed Selim	Cancer Biology
Mr. Omar Agamawy	DNAFit and Nutrigenetics
Dr. Joaquin Lanz	Flavor and Natural Juice solutions
Dr. Shereen Abdel Ghaffar	Scientific Writing
Prof Sherif Nashaat Amin	Medical Test
Dr. Yasser Y. Ibrahim	Apis- mollifier Biotechnology
Dr. Mohamed Ismail	Aquamarine
Dr. Heba Salah	Prenatal Diagnosis

# 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 others from different organizations and different 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 is a list for some of the accommodating hosts that we sent our students to and planning to add for the upcoming year.



Total no. of trainings  
**(6)**

Total no. of students  
trained  
**(667)**

Total no. of staff  
trained  
**(25)**

# Faculty Training & Workshops



## Medical & Pharmaceutical Biotechnology

- 57357
- Greenwich University
- Optoscient Company
- Global Medical Labs



## 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

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

## Global Medical lab

First year students got the opportunity to take part in a training course at Global Medical labs. The course mainly focused on stem cell technology and the basics of cell culture.



## Horticulture Research Institute

First year students partook in a rich training course at the Agricultural Research Institute. The course took place over four weeks and it mainly addressed the basics of HPLC, microbiology as well as spectrophotometry.



## Research Park Cairo University

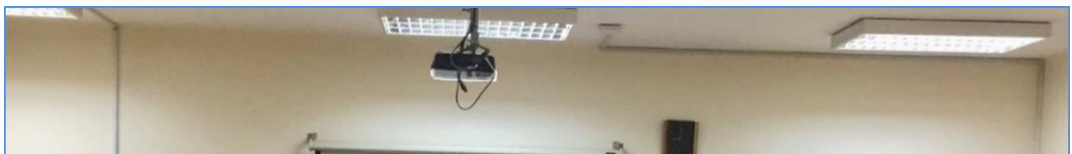
Second year students finished a training course at the Research Park, Cairo University which was a cohesive practical course on the basics and practices of plant tissue culture.



# First Aid Training

The Faculty of Biotechnology has organized a First Aid Training, by the Egyptian Red Crescent International Organization. The sessions were done on three successive days where **105** students joined the training.

At the end of the training course, the students and the lecturer assistants who have passed the training exam and successfully finished the practical part of the training course were given certificates for attendance by the Organization and was nominated as a First Aid



# Staff's Training

7 members of our assisting staff had the opportunity to take part in training courses on and off-campus. The training courses were oriented in multiple disciplines including agricultural biotechnology, medical biotechnology as well as a first-aid training that took place on our faculty's campus.



**T.A Abdel Rahman E. and T.A Hoda Raafat** partook in a training course on the Fall of 2017 at the Horticulture Research Institute, Cairo University. The training included the fundamentals of HPLC, microbiology and spectrophotometry



**T.A Youssra Rashwan** partook in a training course on the Fall of 2017 at Global medical lab. The training included the fundamentals of stem cells technology.



**L.A Hoda Allam** partook in a training course on the Fall of 2017 at the Horticulture Research Institute, Cairo University. The training included the fundamentals of tissue culture



**L.A Ingy EL Hefny, L.A Fouad Ashry, and T.A Dalia Hesham,** partook in a training course on the Fall of 2017 at MSA University . The training included the fundamentals of First Aid techniques



# 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.

**Dr. Hossam Taha**, lecturer at the Faculty of Biotechnology, organized an enlightening session for **all assisting staff (25)** on the sheer principles of Real-Time PCR. His session encompassed the elaborations on essential applications for utilizing this technique. First and foremost, he emphasized how Real time PCR is useful for relative gene expression both quantitatively, in estimating the number of copies of the gene of interest in both mutant and normal samples, and qualitatively, in detecting the presence or absence of certain genes.

Moreover, the session also entailed the main principles in undergoing efficiently mini-prep extraction procedures for extracting intact DNA and RNA samples.



The faculty of biotechnology held a training session for **6** of our assisting staff members on Real-time PCR technology focusing primarily on the practical procedures and protocols. The session was led by **Dr.Hossam Taha**, assistant professor at the faculty, who provided cohesive and elaborate tutoring to the staff members. The attendees for the session included **L.A. Gihan Hammad , L.A Yara Mohamed,L.A. Fouad Ashry , T.A Youssra Rashwan, T.A. Houida Samir, and T.A Mariam Galal.**



To proceed with the faculty of Biotechnology's initiative in building and rehabilitating, **Dr Mohamed Maged** organized a practical session for all assistant staff where a study was performed to express heterogenous proteins using *E.coli* .

A T7 expression vector containing a gene of interest was cloned and was introduced into a T7 expression host (BL21) and was induced using IPTG .

**All the assisting staff** were overwhelmed by such an event, where they were enthusiastic for another practical session to carry out the purification of the expressed protein using chromatography.





## 5. Staff accomplishments

# Staff promotions & accomplishments



Masters Degree

Hassan Zaki  
Hoda Allam  
Yara Mohamed

Academic Staff promoted



to Associate  
Professor

Dr. Ashraf Bakkar



PG-Cert in HE  
current students

Dr. Ashraf Bakkar  
Dr. Reham Mohsen  
Dr. Amgad Rady  
Dr. Hossam Taha  
L.A. Gihan Hammad



PG-Cert in HE  
achievers

Dr. Ahmed Nada  
Dr. Osama Saad  
Dr. Amr Ageez



## 6. National Projects & Grants

## Projects and Grants

On 14<sup>th</sup> of May 2018, the minister of environmental affairs made a visit to the faculty of Biotechnology where he had the chance to view some of the students' projects and has offered a fund to one of our brilliant students 'Rashed Kandeel' who proposed a project that involves using sugar cane for the manufacturing of biofuels.



The minister expressed his admiration for the students' efforts and has had the chance to get acquainted with some of the staff members as well and some of their ventures in the field of environmental biotechnology.



## Previous Projects

The faculty of Biotechnology has acquired an acceptance for a fund from the JESOR Program, Academy of Scientific Research & Technology, for a research proposal in 2016. The JESOR--Development Program is one of the initiatives at the Academy of Scientific Research and Technology to promote proper scientific practice. It builds on the experience of "The Transfer of Knowledge through Expatriate Nationals (TOKTEN) Programme" which was administered by the Academy of Scientific Research and Technology. JESOR allows the Egyptian industry and research institutions to cooperatively work with experts from abroad on a joint project.

This project revolves around an experimental therapeutic for hepatocellular carcinoma (liver cancer), by the application of p53 gene and turmeric in curcumin coated by PEG nanoparticles. The project is one of the first of its kind and is expected to yield extraordinary results. The project acceptance entails a budget of 1 Million EGP over a period of 24 months.



# Previous Projects

- **2013-2015:** Prof. Ayman Diab-The Principal Investigator of the project “Establishment of Technology and Innovation Commercialization Office at MSA University and fostering research innovation in 6th October city”. The Project is funded by the Academy for Scientific Research and Technology – Ministry of Higher Education. Awarded Fund is 700,000 L.E.

- **2012-2015:** Amr Ageez Team member, De novo Sequencing and Assembly of the Egyptian Buffalo Genome. Research project funded by Science& Technology Development Fund (STDF), Ministry of Higher education. Awarded Fund is 2,644,320 L.E.

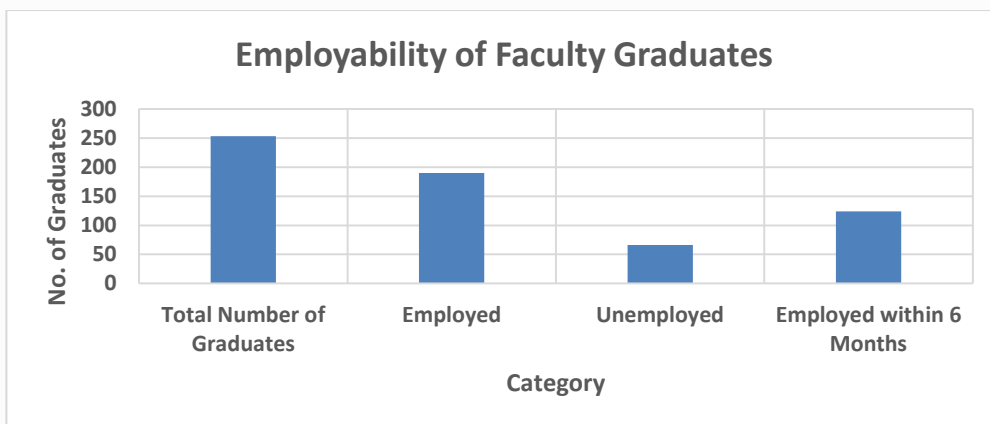
- **2010-2014:** Amr Ageez Personal Investigator, of Development and enhancement of butanol production in E. coli. Research project funded by Science & Technology Development Fund (STDF), Ministry of Higher Education Awarded Fund is 1,000,000 L.E.



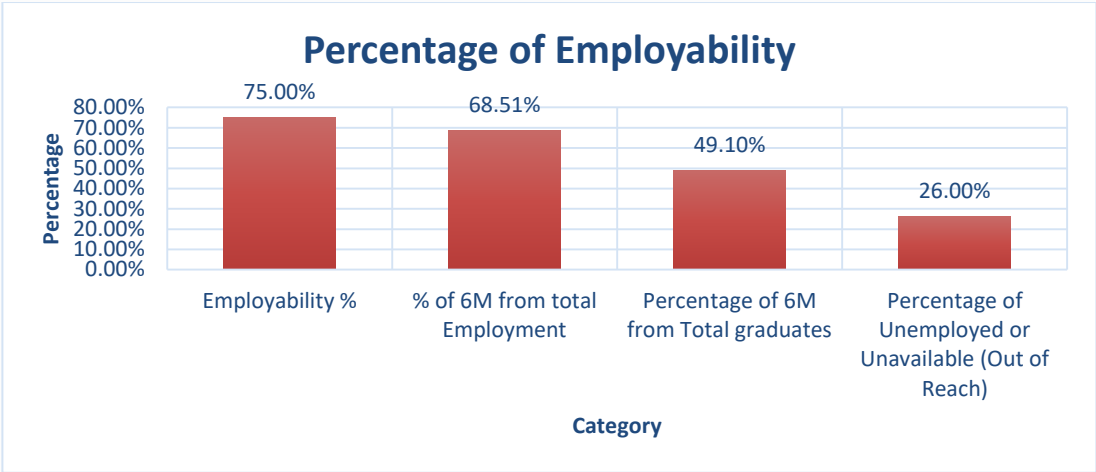
## 7. Alumni Activities

# Alumni Activities

From the below stated tables, out of 253 graduates, 190 are either employed or Postgraduate study students (whether MSc or PhD). And 124 of those were employed or recruited within 6 months of graduation



Time Frame	Total Number of Graduates	Employed	Unemployed	Employed within 6 Months
2009-Mid 2017	253	190	66	124



Time Frame	Employability %	% of 6M from total Employment	Percentage of 6M from Total graduates	Percentage of Unemployed or Unavailable (Out of Reach)
2009-Mid 2017	75. %	68.51%	49.1%	26%



26 July Mehwar Road intersection with Wahat Road, 6th October  
City. Egypt.



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