



Pharos University

Sustainability reporting on SDGs 2019 - 2020

I. Introduction

At the 70th Session of the United Nations General Assembly in September 2015, member states adopted a new global development agenda, *Transforming our world: the 2030 Agenda for Sustainable Development*. There are 17 development goals for sustainable development set out by the UN. At its heart are 17 Sustainable Development Goal. These goals were launched as a global agenda for addressing the multiplicity of social and environmental challenges that face communities.

All Sustainable development goals (SDGs) are increasingly integrated at all levels in universities, including its overall strategy. Egypt has responded to the 17 SDGs by setting national plan: Egypt 2030 (<http://sdsegypt2030.com/?lang=en>). The third Pillar of this plan is on: Knowledge, Innovation and Scientific Research. which includes the following group of elements and components:

- General environment: Represents the role of the State in the creation of an environment that encourages innovation, including motivators and constraints, the economic system, policies, legislation, and principles of governance.
- Infrastructure: Play a fundamental role in supporting the cognitive and creative production by setting standards and laying regulatory foundations of innovation and scientific research, supporting business and innovation, protecting copyright, ensuring availability of information, financing and encouraging investment.
- Education and scientific research: Includes all research organizations and institutions, technical education and vocational training institutions, higher education and scientific research institutions, and research centers.
- Industry: Represents all industrial sectors including large, medium, and small scale companies' activities relevant to research and development.
- Intermediaries: Includes the institutions that link between industrial innovation, and research and development on the one hand, with academic and research institutions on the other hand.
- Development needs: Represents the required demand for innovation, knowledge, and scientific research to fulfill economic and social needs.

II. Relationship with international and nations policies

Pharos University has a direct involvement and input into the UN-SDGs, Egypt-2030 and the national strategy of the state ministry of Higher education and research (Table 1). Development of the strategic goals of Pharos University meet the UN-SDGs , and contribute to identify the national problems and challenges and enable adaptive management through its internal processes (rules and regulations), and external relationships (internationalization and partnerships (<http://www.pua.edu.eg/international/international-partners/>)).

Table 1 The compliance of Pharos university Goals with the UN-SDGs

Pharos University goal	Relation to UN-SDG
1. Raising the efficiency of the institutional capacity to improve competitiveness	GOAL 8: Decent Work and Economic Growth
2. Enhancing and supporting the educational system	GOAL 4: Quality Education GOAL 5: Gender Equality
3. Expanding the support to internationalization	Goal 17 Partnership to achieve the goals
4. Developing the scientific research system and post graduate studies to meet the national strategy	GOAL 4: Quality Education GOAL 5: Gender Equality
5. Expanding the activities of community services and environmental development	GOAL 11: Sustainable Cities and Communities
6. Raising the competitive skills of students	GOAL 4: Quality Education GOAL 5: Gender Equality

The strategic goals of Pharos University (<http://www.pua.edu.eg/about-pua/vision-and-mission/>) were reviewed and updated to meet the national strategies of sustainable development - Egypt 2030, Pillar 3: objectives for the knowledge, innovation, and scientific research to 2030 (<http://sdsegypt2030.com/wp-content/uploads/2016/10/4.-Knowledge-Innovation-Scientific-Research-Pillar2.pdf>).

Table 2 . below indicate the direct involvement of pharos university in with the Sustainable development Strategy: Egypt 2030 (per objective) and the corresponding goals of Pharos University .

Table 2. Involvement of Pharos University with Egypt 2030 strategy

Objective for Knowledge, Innovation, and Scientific Research to 2030 (National SDG Plan)	Definition as indicated in the Sustainable development Strategy: Egypt 2030	Corresponding Pharos University Goal
Creation of a stimulating environment for the localization and production of knowledge	Maximizing knowledge production by enhancing the legislative, investment, and financing environments and providing the fundamental infrastructure	Goal 2. Enhancing and supporting the educational system Goal 1. Raising the efficiency of the institutional capacity to improve competitiveness
Activation and development of an integrated national innovation system	Enhancing the efficiency of innovation production by encouraging creative production, increasing the links between innovation and developmental needs, the development of basic education and higher education as well as research and development	Goal 4. Developing the scientific research system and post graduate studies to meet the national strategy Goal 6. Raising the competitive skills of students.
Linking the knowledge applications and the innovation outputs with priorities	Determining the sectorial priorities and challenges, how to address them by working on increasing the knowledge product for the priority sectors and by raising the local content	Goal 4 Developing the scientific research system and post graduate studies to meet the national strategy. Goal 5. Expanding the activities of community services and environmental development

The Ministry higher education and research has formulated its strategy to cope with EGYPT 2030 Plan. It is available in Arabic in : http://portal.moheer.gov.eg/ar-eg/Documents/Strategy_moheer.pdf)

This strategy is basically summarized in improving 5 main aspects. These are (Translated by author)

- Education
- Scientific research and Innovation
- Capacity building
- Community Services
- Health

Under the aspect of Scientific research and Innovation the following items are included (Translated by author):

1. Accessibility: education accessibility for all
2. Quality: Improvement of quality education system to be consistent and coping with international quality systems
3. Competitiveness: Improvement of outcomes of universities in a competitive manner (ranking)
4. Internationalization: Formulation of MOUs with international universities with the purpose of launching branching of these universities in Egypt, And establishment of joint research and educational programs.
5. Community services: Improvement of community services in the field of health (university hospitals), Medical cohorts, cooperation with NGOs, and awareness activities to alleviate illiteracy and combat corruption

The goals of Pharos university are compliant with all the above items as one of the private universities that is recognized and accredited by the Ministry of higher education and research in Egypt. Table 3 shows the alignment of Pharos University Goals with the goals of the Higher ministry of Education .

Table 3 . Alignment of Pharos University Goals with the goals of the Ministry of Higher Education

Goals	Pharos University Goals	Goals of the Ministry of Higher Education
Goals 1.	Raising the efficiency of the institutional capacity to improve competitiveness.	Improvement of outcomes of universities in a competitive manner (ranking).
Goals 2.	Enhancing and supporting the educational system	Improvement of quality education system to be consistent and coping with international quality systems
Goal 3.	Expanding the support to internationalization	Internationalization: Formulation of MOUs with international universities with the purpose of launching branching of these universities in Egypt, And establishment of joint research and educational programs.
Goal 4.	Developing the scientific research system and post graduate studies to meet the national strategy	Improvement of outcomes of universities in a competitive manner (ranking)
Goal 5.	Expanding the activities of community services and environmental development	Improvement of community services in the field of health (university hospitals), Medical cohorts, cooperation with NGOs, and awareness activities to alleviate illiteracy and combat corruption

Goal 6.	Raising the competitive skills of students	education accessibility for all

Pharos University in Alexandria (PUA) is the only private university in Alexandria. Apart from the international research activities, PUA promotes youth development and foresees the empowerment of young generations to be entrepreneurs in a compressive manner. PUA also is concerned more with local issues and collaborate with local NGOs and Schools to contribute to achieving SDGs. There have been several activities regionally and globally that adds to the SDGs that is either lightly covered or not covered in the previous report of 2018-2019

The university recognizes and follows the articles in the national constitution that is relevant to SDGs 2014 https://www.constituteproject.org/constitution/Egypt_2014.pdf regarding achieving social justice and providing means of social independence (Article 8), ensuring equal opportunities for all citizens without discrimination (article 9), ensuring achievement of equality between men and women

In all aspects (article 11), including appropriate representation of women, guaranteeing women’s right of holding senior management offices in allsectors, and protect women against vioience and enabling her to strike the balance between family duties and work requiments (article 11). Pharos University also has established an employments’ insurance system that follows the social insurance system in a manner that guarantee a decent life (Article 17) .

From the point of view of Pharos university, the 17 SDGs can be categorized into 4 categories.

1. Social wellbeing category including SDGs 1,2,3,4,5,8, 10, 16
2. Environmental Category including SDGs 6,7,12,13,14,15
3. Community advancement Category including SDGs 9,11
4. Outreach Category including SDG17

This report summaries the activities carried out by Pharos university in 2019-2020 to achieve the UN- SDGs. The activities take different forms; conferences for discussions, dialogues and exchange experience on SDG topics, community services by staff members form different departments, students community Projects, identification of problems and research, and internal reports from departments.

Each SDG is dealt with separately report

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III. Conferences and Workshops in SDGs

Conferences/ Workshops Relevant to SDG 3:

- The faculty of Dentistry participated in the “AEEDC Cairo Education Conference and Exhibition” which was held at the Royal Maxim Palace Kempinski Hotel in the 5th Settlement – Cairo on 12-14 December. The AEEDC Cairo Education Conference and Exhibition is considered one of the highly specialized scientific and educational events dedicated to dentistry professionals in Egypt and the wider MENA region. It also discusses the most important issues and the latest developments in the field. The PUA dental students visited the AEEDC exhibition where they got apprised of the state-of-the-art dental equipment and materials. It is worth mentioning that PUA dental students presented many research papers in this conference.

<https://www.pua.edu.eg/a-visit-to-aeedc-education-cairo-conference-and-exhibition/>



- The faculty of Dentistry participated in the Egyptian Dental Exhibition (EDE 2020) on Thursday, 13 February 2020 in at Cairo International Convention Centre (CICC). The trip aimed at apprising the PUA delegation which included a number of faculty members, teaching assistants and students of different academic years of the state-of-the art equipment and technology in general and in the field of dentistry in particular.

<https://www.pua.edu.eg/the-faculty-of-dentistry-organized-a-trip-to-the-egyptian-dental-exhibition/>



- On 21 March 2019, the faculty of Pharmacy organized a workshop on “First Aid”. The workshop addressed the general procedures of first aid for casualties and how to deal with exceptional cases for saving lives e.g handling burns, Fainting and cases of artificial respiration



- The Faculty of Pharmacy and Drug Manufacturing at Pharos University organized a symposium entitled “OTC from A to Z” on Tuesday, 3 March 2020. The lecture was delivered by Dr. Magdy Shalash, the Director of El Taybey Academy for Pharmaceutical Training and Dr. Sally Ibrahim, the Head OTC Department at El Taybey Academy for Pharmaceutical Training. It is worth mentioning that the symposium discussed the following points: How the pharmacist deals with different cases of chronic Arthritis? How to dispense medicines without medical prescription and what are these OTC drugs? What are the cases that should be directly referred to a physician not a pharmacist?

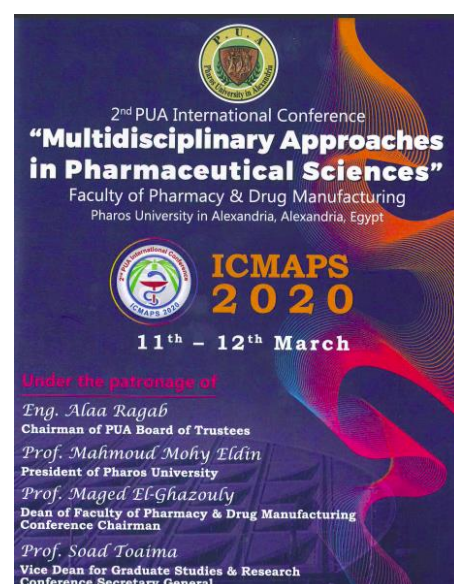
<https://www.pua.edu.eg/otc-from-a-to-z-symposium/od>

- In cooperation with Eva Pharma company, The faculty of Pharmacy organized a campaign on healthy nutrition. Within this event, a side activity was held to measure the percent of body fats and the body water content using “Inbody “ devices. . A lecture was delivered to raise the awareness of students on healthy food and nutritional healthy trends

- On 8 march 2019, the faculty of Pharmacy organized a to the local community in EZBET Al Fetaa on general health conditions campaign. The campaign included measuring the blood sugar level, body fats and how to avoid hypertension. The campaign included also awareness about cancer and potential occurrence.

- The Faculty of Pharmacy held its biannual Conference on Pharmacology in the spring semester of the academic year 2019-2020. The conference was carried out under the auspices of the president of the university, and is supported by several pharmaceutical companies and AUF agency of France. The conference was attended by about 300 expert and researcher, where 102 scientific papers were presented, and published in the conference booklet after being reviewed. International attendees were from France, Finland, Sweden, and Canada. Selected scientific presentations in the conference included:

- Nutrition in Clinical Practice
- The Road from Pharmaceutical Sciences to Patient Care Approach
- Vaccine Nanotechnology; Frontiers and Challenges
- Antibiotic Resistance: A Global Crisis That Requires Out-of- The-Box Solutions
- Advanced Therapeutic Approaches in Managing Diabetic Foot Ulcer



- Burden of Helicobacter pylori Infections and Associated Risk Factors among Cases of Iron Deficiency Anemia in Egypt
- Public Knowledge and Attitudes Towards Antibiotic Usage: A Cross-Sectional Study Among the General Public in Alexandria
- Cross Sectional Study: General Features of Food Allergy in Alexandria
- The Impact of Rising Drug Prices in Egypt
- The Future of Pharma from Evolution to Revolution.
- Documenting Mistakes in Governmental Hospital Pharmacies in Alexandria, Egypt

<https://www.pua.edu.eg/icmaps/>

- On 22 November 2019, the faculty of pharmacy organized a campaign on heart diseases and the relation between the function of the heart and the rest of the body organs. The campaign concentrated on the chronic heart diseases and how to deal with them and avoid them.

- The faculty of Physical Therapy organized a seminar entitled “Advanced Management of Spinal Cord Injuries” on Tuesday, 10 December 2019. The seminar’s keynote speaker was Dr. Mahmoud Yasser, a Spinal and Orthopedic Surgery Consultant who addressed the following points: The advanced treatment methods of spinal cord injuries. Showing examples of x-rays of people who had accidents. The role of physical therapy in following cases after surgery and helping in patients’ rehabilitation.



<https://www.pua.edu.eg/advanced-management-of-spinal-cord-injuries/>

- The faculty of Physical Therapy organized the 1st scientific forum of “Biomechanics” on Tuesday, 24 December 2019 in the Student Theater. The forum included 15 biomechanical models. These models showed a cross section of the body explaining the relation between the muscles and bones and its impact on the body mechanics. The models also showed the surfaces and axes that joints of the body move around. In addition, the representatives of each group of students talked about their projects and the materials used in this project. It is worth mentioning that the students took the principles of sustainable development into consideration by recycling old materials used in the design of previous models, including plastic spoons, empty cups, fiber and wood.



<https://www.pua.edu.eg/the-faculty-of-physical-therapy-hold-the-first-scientific-forum-of-biomechanics/>

- The Faculty of Applied Health Sciences Technology organized a symposium to raise the awareness of coronavirus on Tuesday, 10 March 2020. The symposium was delivered by Dr. Mohamed Salah El Din, an Assistant Professor of Biochemistry and Immunity in the Medical Laboratory Department. The symposium explained the modes of the coronavirus transmission, its symptoms and methods of protection.



<https://www.pua.edu.eg/the-faculty-of-applied-health-sciences-technology-organized-a-symposium-about-coronavirus/>

- Students of Medical Equipment Maintenance Department (Faculty of Applied Health Sciences Technology) have won the third place in the “Pandemic TechHack – Egypt 2020” Competition out of 40 participating ideas which was held on Tuesday, 15 April 2020. The competition is a part of “The Egyptian Virtual Hackathon Against Coronavirus” which is a national initiative to unite efforts and resources using technology and science to: Confront the epidemic.



Help reduce the spread of the virus in Egypt.

Find the technological solutions necessary for dealing with the resulting risks in the case of virus outbreak.

It is worth mentioning that this competition is one of the innovation and entrepreneurship competitions which are managed under the supervision of the Academy of Scientific Research and Technology, the U.S Embassy, the Egyptian Ministry of Health and Population and the American University in Cairo.

The participating students developed a Smart Coronavirus Mask “SCM” using a 3D design program. The SCM is for protection and early detection of COVID-19 and also sending the results to a mobile application that can automatically display and update the health status of the mask user.

<https://www.pua.edu.eg/pharos-university-won-the-third-place-in-pandemic-techhack-egypt-2020-competition/>



- The faculty of Mass Communication organized a symposium entitled “ The Role of Media in Combating Drug Abuse” on Tuesday, 3 December 2019. In the symposium the psychological and physical effects of drugs on the addict was discussed. The types of drugs and the general dangers of drug abuse and addiction and its psychological effects in particular were also highlighted. The following topics were discussed: the constructive and destructive roles of mass media in this issue, the procedures that should be followed in addressing this issue. At the last section of the symposium, freshmen presented some ideas of a campaign to be launched under the name of “Towards No Drug Abuse” accompanied by some videos.

<https://www.pua.edu.eg/the-role-of-media-in-combating-drug-abuse/>

Conferences/ Workshops Relevant to SDG 9:

- **The Petrochemical Engineering Department (Faculty of Engineering)** announces the start of a number of online **summer training courses**. The three-week courses will start on Saturday, **15 August 2020** and the registration opens on Monday, 10 August 2020. It is worth mentioning that the first training course entitles “Trouble shooting in Petrochemical plants” and will be attended by a number of experienced professionals in the field of petrochemical industry.



<https://www.pua.edu.eg/the-petrochemical-engineering-department-holds-the-summer-training-courses/>

- On October 10th 2019, staff and students of the faculty of engineering had a field visit to Alex Electricity Distribution Company to explore electrical energy distribution and energy conservation practices, which is inline with SDG 9 (Industry, Innovation and infrast.) and SDG 7 Affordable energy
- ON December 8, 2019, staff and students of the faculty of engineering had a field visit to Sidi Kerier petrochemical company (SidPec), to learn more about polymers and its production, and the quality aspects associated with this industry.
- On December 12 2019, 2019, staff and students of the faculty of engineering had a field visit to Alexandria Company for fertilizers, to explore more about this industry, and its production with the minimum use of energy . , which is inline with SDG 9 (Industry, Innovation and infrast.)



- During the period of November 2019, the Faculty of Engineering organized a workshop in cooperation with
- the Plastic Technology Center in Alexandria ,
- ministry of trade and industry,
- SEED project of the USAID,
- Cabinet of chemical industries, and
- The Value Chain Development Center of the Nile Pioneers Initiative

The workshop title was " Degradable plastics and additive technology". The aim of the project was spreading the awareness of plastic manufacturers in Murgham Complex, on additive technology for degradable plastics.

The workshop, dealt with new technologies in using additives to produce plastics and biodegradable paints instead of traditional plastics, and how to motivate and encourage institutions and companies to use it and reduce the cost of its production. A number of participating companies presented some studies for their production of plastic and biodegradable paints in the presence of a number of Industrial representatives

Conferences/ Workshops Relevant to SDG 11:

- In the academic year 2019- 2020, Staff members of the faculty of Applied Medical Sciences Technology coordinated a **workshop** " Sustainable clean Environment" . This workshop was carried out jointly with Alexandria Governorate, Kim Company for petroleum services, Ministry of Environment.

Conferences/ Workshops Relevant to SDG 12:

- On December 10, 2019 the faculty of Engineering organized a workshop on "Sustainable Development" . The workshop included It included defining the concept of sustainable development, how to utilize and preserve resources, and the state's vision for implementing sustainable development
- On April 2019 through the 17th , and Within the framework of Pharos University's interest in contributing to the achievement of sustainable development goals in education and scientific research, Pharos University had the honor to receive Dr. Fredrik Gröndahl - Head of the Department of Sustainable Development and Environmental Science and Engineering at the Royal Institute of Technology in Sweden KTH. The workshop began daily with a general lecture on the general sustainability concepts. The lectures delivered covered topics on climate change, organic pollutants, the development of the concept of sustainability in general, as well as its applications in the field of transportation

Conferences/ Workshops Relevant to SDG 16:

- The Faculty of Legal Studies and International Relations, in cooperation with the Faculty of Physical Therapy, held a symposium entitled “The Role of Forensic Medicine in Achieving Criminal Justice” on Tuesday, 17 December 2019 at the Student Theatre. The symposium started by discussing the legal aspect of the forensic medicine cases; a point that was addressed by Prof. Hamam Zahran, the Dean of the Faculty of Legal Studies and International Relations; Dr. Alaa Abd Rabou, a Lecturer at the Criminal Law Department and Mr. Ahmed Shaltwoot, the Vice President of the Court of Cassation. Then, Prof. Maha Ghanem who is specialized in Forensic Medicine at the Faculty of Medicine in Alexandria University spoke about the significant role of forensic medicine in guiding public prosecutors, lawyers and the system of criminal justice to solve crimes and achieve justice. She also discussed many legal cases that she was involved in, due to the nature of her profession. The symposium was attended by members of a large number of judicial institutions, the council of the Lawyers’ Syndicate, prominent lawyers, faculty members, teaching assistants, the faculty undergraduates and alumni.



<https://www.pua.edu.eg/the-role-of-forensic-medicine-in-achieving-criminal-justice/>

- The Faculty of Tourism and Hotel Management organized a seminar on human rights and the attitudes of the responsible tourist on Tuesday, 10 December 2019. The seminar included presentations about the most prominent figures in the field of human rights and the responsible behaviour of the tourist.



<https://www.pua.edu.eg/how-to-be-a-responsible-tourist/>

IV. Activities Related to SDGs

Activities of SDG 1 :

- The **faculty of Tourism and Hotel Management** organized a **humanitarian convoy** to deliver blankets to some of the needy families in Abdel Qader District families. This convoy was launched on Tuesday, **17 December 2019** in cooperation with the Social Activities Committee affiliated to the Student Activities Department and Elestkrar Charity. After studying each family's situation, the students bought 90 blankets and distributed them to the needy families to alleviate their burden.



<https://www.pua.edu.eg/pua-humanitarian-convoy/>

- **The Student Activities Department** organized a humanitarian aid convoy on **24/1/2020** to deliver blankets to Abees District in Alexandria. The organization of this convoy was managed in coordination with the Ministry of Social Solidarity and Alexandria Governorate. It is worth mentioning that a large number of students from **different faculties** participated in this convoy. In addition to that, the convoy was accompanied by supervisors from the Security and Student Activities departments, Prof. Hesham El Shimy, the Student Activities Leader and Prof. Ramadan Abo El Ala, the PUA Vice President. Moreover, Dr. Jackline Azar, the Deputy Governor of Alexandria was keen to participate and follow up the proceedings of this convoy where she expressed her admiration for the university's activities in the field of community service and the students' behavior.

<https://www.pua.edu.eg/pharos-university-sent-a-humanitarian-aid-convoy-to-abees-district-in-alexandria/>



- The **Student Activities Department** organized **five humanitarian aid convoys** to deliver blankets to the needy areas in both the east and west of Alexandria. These convoys were launched on **6 and 8 February 2020**, in coordination with a number of public charity organizations, including Rowad Elkheir, Elmotadaroon, Mojeeb Elsaleen which located in Rabaa Elnasriya, Abees neighbourhood as well as Elestkrar and Abdelkader charities located in Toshka, Alamreya neighbourhood.



It is worth mentioning that a large number of students from different faculties participated in these convoys. The coordination of these convoys was managed by both the personnel of the Student Activities Department and Prof. Ramadan Abu El-Ala, the Vice President of Community Service and Environment Development Affairs.

<https://www.pua.edu.eg/pua-sent-aid-convoys-to-the-needy-in-eastern-and-western-areas-of-alexandria/>

- In the light of the **Student Activities Plan** set for the academic year 2019-2020, **Dream Team, one of the PUA student-led clubs**, organized a **humanitarian aid convoy** to deliver blankets to one of the needy areas in Alexandria. This was held on Friday, **20 December 2019**. The coordination of the convoy was managed in collaboration with Tarek El Kheir Charity. Before sending the convoy, the PUA students made a



a survey about the socio-economic status of the residents. Based on the findings of this survey, blankets were distributed among widows and orphans of the needy families.

<https://www.pua.edu.eg/dream-team-organized-a-humanitarian-aid-convoy-2/>

The Faculty of Pharmacy held its **Charity Market day** under the auspices of the Student Activities Department, on Tuesday 16/4/2019 at the entrance foyer of the faculty. The activity included distributing goods in low prices for the most needed community dwellers.

Activities of SDG 3

- The faculty of Pharmacy has established a specialized center for international publication consultation and nanotechnology in 2019. Since its opening, the center carried out about 200 research consultation including electronic ones. The manager of the center has signed 7 international MOUs for international publication, one of which

is already published in the highest 5% ranked journals according to JCR. The MOUs are with:

- Laboratory for Molecular Design of Pharmaceuticals, Faculty of Pharmaceutical Sciences,
 - Hokkaido University Japan
 - Department of Internal Medicine and Medical Specialties, University of Genoa, Genoa, Italy
 - Department of pharmaceuticals; faculty of pharmacy; Damanhur University
 - Department of pharmaceuticals; Alexandria university
 - <https://www.pua.edu.eg/continuing-education/international-publication-nanotechnology-consultation-center-incc/>
- PUA-Faculty of Pharmacy participates in the alliance with a subproject entitled “Galanthamine / Chitosan Complex Nanoparticles: Form Bench to Bedside”. The current project aims at conducting a complete pharmacokinetic/pharmacodynamic study in Alzheimer’s disease animal model; which should be the starting point of transforming this prototype nanoparticle system from bench to bedside, offering better patient compliance, therapeutic outcomes, and decreased galantamine dose; thus lower production cost.

<https://www.pua.edu.eg/continuing-education/international-publication-nanotechnology-consultation-center-incc/>

- The Nutrition Department at the *Faculty of Allied Medical Sciences* launched “Healthy Campus Initiative” on Tuesday, 9 April, 2019. This initiative aimed at highlighting the profound impact of nutritional knowledge in eradicating health illiteracy. According to the findings of the researches conducted last year which showed low health and nutrition literacy, the main objective of this study is to raise the students’ nutritional and health awareness through informing the students the basic nutrients, their sources and functions as well as promoting conscious eating habits by using models of dietary guidance systems and healthy eating; traffic light system and healthy eating pyramid.


<https://www.pua.edu.eg/the-faculty-of-allied-medical-sciences-launched-a-healthy-campus-initiative/>

- The Faculty of Pharmacy held an awareness campaign on Blood pressure and heart diseases, and Osteoporosis among students of Pharos University on 5/3/2019, 22/11/2019 and 30/11/2019 respectively. Blood pressure and Blood sugar levels were measured during the campaign and used to serve the awareness activity.

<https://www.pua.edu.eg/the-faculty-of-allied-medical-sciences-launched-a-healthy-campus-initiative/>

- The Faculty of Pharmacy has established a project entitled : Integrated Pharmaceutical Alliance (IPA); towards production of technology based Egyptian Pharmaceutical products. The alliance is funded by the Academy of Scientific Research and Technology under the Egypt Research and Technology Alliances (EG-KTA) Program. Its general objective is the integration of pharmaceutical industry with academia, public sectors and Non-Governmental Organization (NGO) to deepen local manufacturing in pharmaceutical industries and increase its competitiveness.

Integrated Pharmaceutical Alliance

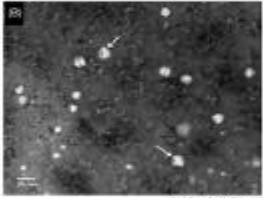
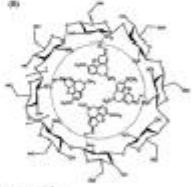


4- Pharos University in Alexandria (PUA)



Pharos University (PUA)
Faculty of Pharmacy & Drug Manufacturing
www.pua.edu.eg/ | info@pharos.edu.eg/ | 1927

Dr. Maged El Ghazouly,
Dean & Prof. of Pharmacognosy, Faculty of Pharmacy
maged.elghazouly@puu.edu.eg
+20 1001708666

- Production of Galantamine/ chitosan complex Nanoparticles

GII-headed CD6-NF2 nanoparticles (Pharos)








ACKNOWLEDGMENT:
 The alliance is funded by the Academy of Scientific Research and Technology under the "Egypt Research and Technology Missions (EG-RTM) Program"










The alliance constitutes from different partners;

- 4 academic partners : German university(GUC), Pharos University in Alexandria (PUA) National Research Center (NRC), Arab Academy of Science, Technology and Martinme
 - 5 industrial partners : (El-Nasr, Memphis, Health Tech & ATOS),
 - 2 from public sectors
 - (NODCAR & Vaccera) and one NGO (Misr el Kheir)
- PUA-Faculty of Pharmacy participates in the alliance with a subproject entitled "Galanthamine / Chitosan Complex Nanoparticles: Form Bench to Bedside". The current project aims at conducting a complete pharmacokinetic/pharmacodynamic study in Alzheimer's disease animal model; which should be the starting point of transforming this prototype nanoparticle system from bench to bedside, offering better patient compliance, therapeutic outcomes, and decreased galantamine dose; thus lower production cost.
 - The faculty of Dentistry sent an aid convoy teemed with dental personnel and supplies, to Al Hadayah Nursing Home on Wednesday, 26 February 2020. The PUA dental staff examined



more than 100 male and female patients of the residents of the nursing home and provided them with free of charge treatment. The PUA dentists also gave the residents some tips of how to take care of their teeth. They also gave them toothpastes and tooth brushes as gifts from the faculty of Dentistry.

<https://www.pua.edu.eg/a-medical-aid-convoy-to-al-hadayah-nursing-home/>

- The faculty of Pharmacy and Drug Manufacturing launched a campaign to raise awareness about vitamin D on Tuesday, 10 December 2019 in the foyer of the faculty. This was held in cooperation with the faculty scientific committee. During the campaign, a number of leaflets that had many information about Vitamin D and its importance, were distributed. A group of the faculty students also introduced the faculty administrative staff and students of different faculties to the importance of Vitamin D, how to monitor its level in the body, the symptoms of its deficiency and the risks of increasing in its level in the body.

<https://www.pua.edu.eg/why-do-you-need-vitamin-d/>

- The faculty of Pharmacy and Drug Manufacturing organized a field trip to El Miri Hospital for the fourth-year students. The aim of the trip was to introduce the students to the clinical pharmacy applications in the hospital. The students visited the oncology department where chemotherapy drugs are prepared for patients, the radiotherapy department, the dialysis unit and the Total Parenteral Nutrition (TPN) Unit. The supervisors of these departments explained the role of hospital pharmacist in different departments and the procedures followed to ensure the quality of pharmacy services as well as the preventive measures to ensure occupational health in different departments.

<https://www.pua.edu.eg/a-field-trip-to-el-miri-hospital/>

- The faculty of Physical Therapy organized a trip to the National Institute of Neuromotor System on Thursday, 19 December 2019. The trip aimed to provide the students with the opportunity to identify different cases of mobility impairment, how to treat and follow them up. Firstly, the students took a tour in the institute to visit the neurological rehabilitation unit, the orthopedic unit and the pediatrics unit. Then, they went to the physical therapy building and visited the hydrotherapy department; a section which the institute is distinguished by all over Egypt. At the end of this tour, the students were introduced to the Splints and Artificial Limbs Factory and their different manufacturing phases.

<https://www.pua.edu.eg/a-trip-to-the-national-institute-of-neuromotor-system/>



- The faculty of Physical Therapy, in cooperation with Sonaa Al-Hayat student club, organized a visit to Mohamed Ragab Nursing Home on Tuesday, 10 December 2019. The students spent quality time with the residents and did many activities with them. At the end of the visit, the students distributed gifts, including mus'hafs, rosaries and decorated colored cups.

<https://www.pua.edu.eg/a-visit-to-mohamed-ragab-nursing-home/>



- The Faculty of Applied Health Sciences Technology organized a field trip for the students of the third and fourth year classes to El Shatby University Hospital for Children. This was held on Wednesday, 26 February 2020. During the visit, Associate Prof. Maha Youssef, the Head of the Hematology Unit escorted the delegation in a tour around the hospital different departments, including the Endocrinology Department, the Gastroenterology Department, the Hematology Department, the Dialysis Unit and the Reception. At the end of the visit, the delegation visited the university blood bank where the students were acquainted with the blood transfusion process, the apheresis technology and the apparatus used in it.

<https://www.pua.edu.eg/a-field-trip-to-el-shatby-university-hospital-for-children/>



- The Faculty of Applied Health Sciences Technology organized a campaign to raise the awareness of the faculty students about vitamin (D) deficiency on Tuesday, 10 March 2020. The campaign shed light on the importance of vitamin (D), its nutritional sources, the causes of its deficiency and deficiency tests. During the campaign, food and drinks rich with vitamin (D) were distributed.

<https://www.pua.edu.eg/raising-awareness-of-vitamin-d-deficiency/>

- The faculty of Tourism and Hotel Management made a video in Spanish for giving moral support to coronavirus patients in Egypt and Spain and urging them to stay home. A session was held on Saturday, 25 April 2020 to display the video which is considered a practical application of the course of "Spanish as a Second Language".

<https://www.pua.edu.eg/a-video-for-supporting-coronavirus-patients-in-egypt-and-spain/>

Video link:

https://www.youtube.com/watch?reload=9&v=02Uz_tHuHs&feature=emb_title

- The faculty of mass communication produces a short film on a film called "Devetsia" demonstrating the environmental resources on land, water

resources, desert ecosystem services regarding natural health treatments, and ecotourism in sustainable cities.

- <https://www.youtube.com/watch?v=sQrc2ufKFC4&list=PLsZ1HNIwxSAPBp9Ff74mHK1NbRVLCp-52&index=2>

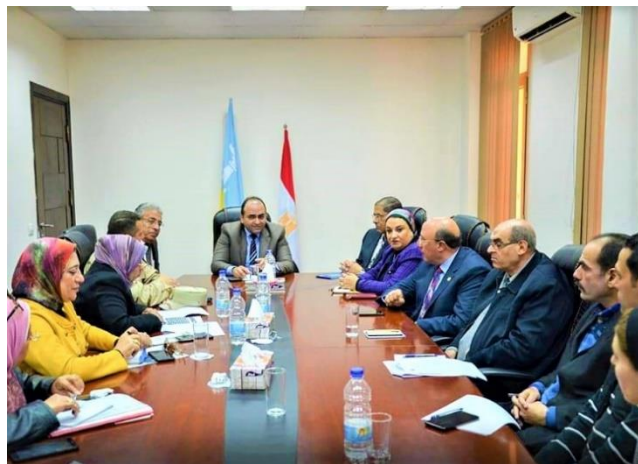
Activities of SDG 6:

On Tuesday 26 November 2019, the faculty of Engineering organized a symposium on “Safe disposal of sewage water and its impact and environmental protection”. The symposium addressed the challenges facing Alexandria governorate and the stages of safe disposal of sewage water and its sources, whether from agricultural drainage, industrial drainage, or human drainage. The symposium also addressed the modern methods currently used to reuse that water and potential extracts such as fertilizers and road asphalt



Activities of SDG 7:

- The Petrochemical Engineering Department (Faculty of Engineering), in cooperation with the PUA student chapter of the Society of Petroleum Engineers (SPE) at the Faculty of Engineering, held a symposium about the future of petrochemicals and chemical engineering on Tuesday, 10 March 2020. The symposium was given by Eng. Karim Ezzat, the Head of the Chemical Engineering Department at the Syndicate of Engineers in Alexandria. Many important topics were discussed in the symposium, including:
 - The relationship between petrochemical engineering and chemical engineering.
 - Job opportunities in the field of petrochemical engineering.
 - The syndicate’s services for students.
 - The considerable value of field training for the engineering student.



<https://www.pua.edu.eg/the-future-of-petrochemicals-and-chemical-engineering/>

Activities of SDG 10:

- The faculty of Mass Communication, organized a celebration for orphans on Wednesday, 18 December 2019 under the name of “Yalla Nsaed” (Let’s Help Each Other). The event started with playing DJ music, then the children played various games with their favorite cartoon character toys and received food and sweets. The event ended by distributing



gifts among the orphans who were very eager to continue dancing with before leaving the faculty.

<https://www.pua.edu.eg/yalla-nsaaed/>

- The faculty of mass communication produces a short film on deafness and hearing impairment “Do Understand ME” which addresses different activities of persons with disabilities and how to include them day to day living conditions.

<https://www.youtube.com/watch?v=HwoLx5Q3gvE&list=PLsZ1HNiwxSAPBp9Ff74mHK1NbRVLCp-52&index=8>

Activities of SDG 11:

- **The Community Service and Environment Development Affairs and the Community Service and Environmental Development Centre (CSED), Pharos University participated in a meeting about the “Live Green” initiative. The meeting was held in Alexandria Governorate Office on Wednesday, 12 February 2020.** The meeting aimed to discuss the mechanisms to apply the “Live Green” initiative launched by the President of Egypt to raise environmental awareness in Alexandria. The importance of the consultative role of Pharos University which came within the framework of the government keenness to achieve cooperation and integration by taking advantage of the experiences of the scientific bodies in Alexandria and working hand in hand for the benefit of the governorate was stressed. A study on “Harmonic Mechanisms for Treating all Types of Wastewater to Irrigate a Sustainable Green Belt to Protect the Vicinity of Lake Mariout.” Was presented by CSED representative. It is worth mentioning that the study impressed all the attendees and it was stressed upon the need for adopting that study by the governorate and other authorities at the local and central levels.

<https://www.pua.edu.eg/pharos-contributions-in-the-live-green-presidential-initiative/>

- The faculty of mass communication produces a short film on a film on Ecotourism on the culture and heritage of villages in upper Egypt and called “Fedalos Anay” or “We Welcome you” . The film addresses the life of these small villages that were drowned under water before and currently after saving it is sustainable. The film also covers the traditional knowledge particularly for women and its role in he day to day life.

- <https://www.youtube.com/watch?v=D6HwJvQK-Uk&list=PLsZ1HNiwxSAPBp9Ff74mHK1NbRVLCp-52&index=11>

- On 22 October 2019, staff and students of the faculty of engineering had a field visit to Transport and Engineering company to explore the sustainable use of raw materials e.g. oils, strands, reuse of water and they had a presentation on the standard procedures and methodologies for testing the materials used in this industry



Activities of SDG 12:

- The university has a mechanism for handling solid wastes and hazardous substances. This is carried out according to the instructions of the maintenance department at the university and the university technicians. The directory of environmental affairs at the university takes the responsibility of supplying all the material

needed for handling the wastes, e.g.. gloves, masks, gowns, as well special safety boxes (red in color) , where all the sharp materials are disposed. The experimental animal remains are collected in special bags and placed in a refrigerator till collected. The process of disposal starts by separating the wastes in place, and placing them in the boxes identified till the collection stage and final disposal

- The university has signed two binding contracts with specialized companies to deal with the hazardous wastes includes wastes form labs and clinics. These companies were selected according to their environmental portfolio that ensure sustainability ongoing practices. A copy of these contracts are in Appendix 1
- All the procedures of disposing solid and liquid wastes are registered in the annual Environmental university portfolio that identify the number of employees, the number of faculties and departments, the number of clinics, types of wastes and date production and collection. This portfolio is registered at the university for internal use, and at the governorate of Alexandria for assessments and monitoring. (Appendix 2)

Activities of SDG 13:

- In 2019, the staff members of the Faculty of Applied Medical Science Technology participated in an international workshop on “ Air Pollution” in coordination with UNESCO and Alexandria Governorate.
- The faculty of mass communication produces a short film on a film called “ Devetsia” demonstrating the environmental resources on land, water resources, desert ecosystem services regarding natural heath treatments, and ecotourism in sustainable cities.

<https://www.youtube.com/watch?v=sQrc2ufKFC4&list=PLsZ1HNiwxSAPBp9Ff74mHK1NbRVLCp-52&index=2>

Activities of SDG 14:

Although The topic “life below water” is beyond the interest of Pharous University, The faculty of mass communication produces a short film on a film on Ecotourism and the culture and heritage of villages in upper Egypt. This film is called “Fedalos Anay” or “We Welcome you” . The film addresses the life of these small villages that were droned under water before and currently these villages are saved and sustainable. The film also covers the traditional knowledge particularly for women and its role in day life. These villages after saving are not affected be being previously under water. All infrastructure is retained and sustained.

<dhttps://www.youtube.com/watch?v=D6HwJvQK-Uk&list=PLsZ1HNiwxSAPBp9Ff74mHK1NbRVLCp-52&index=11>

Activities of SDG 15:

The faculty of mass communication produces a short film on a film called “ Devetsia” demonstrating the environmental resources on land, water resources, desert ecosystem services regarding natural heath treatments, and ecotourism in sustainable cities.

<https://www.youtube.com/watch?v=sQrc2ufKFC4&list=PLsZ1HNiwxSAPBp9Ff74mHK1NbRVLCp-52&index=2>

V. Cooperation with Hospitals, NGOs and Private sector

- Pharos University cooperates with governmental and private national hospitals that belongs to the Ministry of Health in Alexandria and Beheria governorates. Training of students of the faculties of Pharmacy, dentistry, Applied health sciences and technology , and physical therapy are held in such hospitals.

List of governmental and Private hospitals in Alexandria and Beheria Governorates that cooperated with Pharos University for t students' raining and internships

Hospital Name	Purpose
Armed Forces Hospital- Mustafa Kamel	Internships
Naval Forces Hospital	Internships
General Military Hospital	Internships
Institute of Medical research hospital	Training and internships
Faculty of Medicine Hospital of Alexandria University	Training and research
America Hospital	Training
Ahmed Maher Hospital	Students Projects
Abou Kir Hospital	Training
Gomhoria Hospital	Training
El Qasr El Ainy Hospital	Training
Dekernis Hospital	Training
Police Hospital	Training
Abou Homous Hospital	Training
Wenget Hospital	Training
El Menshawy Hospital	Training
57375 Hostital	Students activities
Burg El Arab Hospital	Students activities

- Cooperation with Ministers and governmental agencies
Pharos university cooperates with ministries and national directorates in the health

List of Ministries and National Directorates in the health sector that Pharos University cooperated with for implementing Students' community projects.

Institute of Cultural Affairs	Students Projects
Education Directorate – Alexandria Governorate, Ministry of education	Community service projects
Education Directorate – Beheria Governorate, Ministry of education	Community service projects
Health Directorate – Ministry of Health	Community service projects
Cairo University	Research
Alexandria University	Research
Al Azhar Unversity	Research Project
Menia University	Research Project
Academy of Science and Technology	Research Project
High Institute of Public Health	Research Project

- Pharos University cooperates with NGOs for implementing Students' community projects. Below is the List of NGOs that Pharos University Cooperates with for Community Service Projects

Egyptian Network for Research Ethics Committees	Research Project
Naba'a Al Hayat Foundation	Community service projects
Mojeeb Al Salayen Foundation	Community service projects
Al Staqrar Foundation	Community service projects
Kafalat Al Yateem Foundation at Fata neighborhood	Community service projects
Al Qalaa for Community Development.	Community service projects
Eleen ElGaria association	Community service projects
Abdel Kadr Association	Community service projects
Tarek Charity Association (Mustafa Kamel)	Community service projects
Abu Masoud Suburb (Amiria)	Community service projects
Ayadi Mostakbal medical center (NGO)	Training
Omda Development Association (NGO)	Students Projects
Association of community based rehabilitation for disabled children (NGO)	Students Projects
Red Crescent Association (Mohandeseen)	

- Cooperation with Private sector

Private sector is an important sector that Pharos university is keen to cooperate with for different purposes, mainly for meeting, conferences and workshops. Such meetings allow the recognition of new trends in the local and regional market, and allow meeting the market needs. Below is the List of private sectors That Pharos University Cooperates with

Company name	Type of cooperation
Eva Pharma	Participation in Conference
Innova Pharma	Participation in Conference
Hygint Pharmaceutical company Ltd.	Participation in Conference
Goweily Academy	Workshops
Andalusia Hospital (Private Hospital)	Students activities
El Yousr Hospital (private Hospital)	Students Projects
Fawzy Moaaz Hospital (Private Hospital)	Students Projects
Carrefour	Partnership
Easy Care Company	Partnership
Mena For Touristic and Real Estate Development	Partnership
Alexandria Company For Pharmaceuticals	Partnership
Khalil Pharmacies	Students Projects
Seif Pharmacies	Students Projects
SABshire for Pharmaceutical industries	Students Projects
Alexandria Company for Pharmaceutical industries	Students Projects
Pharco Company	Partnership
ABB Electrical Industries (ABB Arab) S.A.E	Partnership

VI. Local MOUS

1. In the health sector- Hospitals

In 2019, the faculty Pharmacy have signed several MOUS for cooperation between Pharos University and hospitals and pharmaceutical companies in Egypt with the aim of students training for the completion of their gradation these hospitals are:

Hospital Name with signed agreements	No of students	Company name	No of students
Mostafa Kamel Hospital	102	Pharco company	20
Alexandria University Hospital	102	Egyptian Pharmaceutical Company	16
Ras El Tin Hospital	71	El Burg for pharmaceutical industrial	15
Ministry of health hospitals	41	Seif Pharma	15
El Salama Hospital	40		
57357 Hospital Cairo	20		
57357 Hospital Tanta	71		
Tanta Center for cancer	10		
International center for Cardiology (ICC)	10		
Alexandria Vascular center AVC	10		
San Mary Hospital- Alex	12		
Zamzam Hospital - Alex	2		

2. In the field of industry and Industrial Companies

- The Egyptian Ethylene & Derivatives Company (ETHYDCO).
- AlexFert Alexandria company for fertilizers
- Sidi Kerir Petrochemicals Co. (Sidpec)
- Egyptian Petrochemicals Company
- Alex Electricity Distribution Company
- EPROM - Egyptian Projects Operation & Maintenance
- Egypt Experts for Software and Hardware
- Mosahamet El Behera

3. IN THE FIELD OF ARCHITECTURAL, HERITAGE AND ARTS

Training site and company Names	CONTACT EMAILS
مكتب سعود عمارة وتخطيط Saud office for architecture and planning	HSEOUDY@SEOUDY.NET
شركة الديوان للمقاولات Dewan Company for constructions	GAMALOMAR302@GMAIL.COM
مكتب مهندس أحمد محمود فرغلى للمقاولات المتكاملة Office of Eng. Mahnoud Farghaly for integrated construction	ENGAHMEDPRIVATE@GMAIL.COM
قصرالسلام El Salam Palace	RMADANSADEED@GMAIL.COM
شركة بيلرز للإستثمار العقارى والمقاولات Pillars for construction	PILLARSFORCONSTRUCTION@GMAIL.COM
Alexa group	QC@ALEXAGROUP.ORY
office of design	MAHMOUDELKHATIBDESIGN87@GMAIL.COM
Sky line orouba	MAHINOOR.MAHMOUD@OROUBAMISR.COM
خالد أمين مصطفى هلال للمقاولات والتوريدات العمومية KAMH for constructions and general supplies	IBRAHIM.MAHMOUD9994@GMAIL.COM
مطبعة الفانار El Fanar press	ELFANAR_PRESS@GMAIL.COM
مكتب حاتم زقزوق للعمارة والأنشات Hazem Zakzouk for architecture and construction	ARCHHMZ@GMAIL.COM
شركة بيت فياض Fayad house company	FAYAD_BUSINESS@HOTMAIL.COM
شركة بي أو سي للمقاولات العامة B and C for general constructions	KH_POC@YAHOO.COM
Avenue for interior design	AVENUEFORINTERIORDESIGN@YAHOO.COM
easy build	MAHMOUDSASI1@GMAIL.COM
للإستشارات الهندسية interiors Inc.	AHMEDMOSTAFA.NN1.ARCH@GMAIL.COM
MAH Design	ABDELRAHMAN.HASSAN20@GMAIL.COM
مكتب المهندس محمد خالد Eng Mohamed Khaled office	EWAAN.INTERIORS@GMAIL.COM
المجموعة الهندسية للعمارة والديكور Engineering group for Agricultire and design	EGAD@EGAD_EG.COM
ديكور للإبداع Creation design	ELRAYESA395@GMAIL.COM , MOUTAZAHMED97@YAHOO.COM
المجموعة المتحدة للإستشارات الهندسية United Group for engineering Consultancies	M.F_SHETA@YAHOO.COM
مكتب المهندس أحمد درويش	TATOLADARWISH.AD@GMAIL.COM

Office of Eng. Ahmed Darwish new line company	GM@NEWHINESGROUP.COM
المجموعة الإستشارية للأعمال الهندسية Consulting Group fro engineering works	CG.EG2012@GMAIL.COM
Architectural civil engineer	AHMEDGAMAL9133@GMAIL.COM
الشوربجي El Shourbagy	SAIDELGENDYSHC@GMAIL.COM - SAID_ELGENDY2000@YAHOO.COM
شركة العطا في صبره El Atfy Sabrah company	TOTA.DARWISH1@GMAIL.COM
Home designs	HRMEDESIGNS@OUTLOOK.COM
Mena county	RAWDAH_GABER@MENACOUNTRY.COM
دهب ديزاين Dahab Diazeen	MAHAZAATOUT2012@YAHOO.COM
Architectural civil engineer	AHMEDGAMAL9133@GMAIL.COM
مصنع عرنسة للأثاث Arisa factory for Furniture	SARAAMMAR443@GMAIL.COM
مدينة للهندسة والأنشاءات Engineering and Construction City	SHADYELSHAFIE91@GMAIL.COM
شركة البنيان للأعمال الهندسية Al Benian fro Engineering works	ZEKO.NAHDA.COMMENT@GMAIL.COM
عبد العزيز لعموم المقاولات والتوريدات Abdel Aziz Lamloum fro construction and supplies	GEDOS100@GMAIL.COM
High value company	BASEMMOHAMED198@GMAIL.COM
Leader`s Group	NADER.AZIZ.ADLY@GMAIL.COM
كروكي ديزاين Kroky design company	KROKYDESIGN87@GMAIL.COM
دارى ديزاين Dary Design company	BASSANTBARAKAT@GMAIL.COM
جرافوتك Graftek company	YORO.GAWDAT@GMAIL.COM

4. In the field of communication and Media

- In the field of Journalism:

- Institution of Al Ahram for training students in Journalism
- The national authority for journalism
- El Watan Journal
- Masrawy Journal
- El Mary El Youm Journal

-In the field of Radio and TV:

- Channel No. 1 of the National TV
- Rotana Channel
- BBC Channel
- CBC Channel- Extra News











5. In the field of Public Relations and marketing communication












- LOOK Agency for advertisements










VII. International Partnerships

partnerships in all types of activities including research, joint projects, joint programs, students' activities and conferences. Also, there has been programmed exchange of visits for staff and students (mobilities) under several EU projects that contribute to all the above activities.

Table 26. International Partnerships (MOUs)

Medical Sector	International Institute	Contributing to SDG
Dentistry	The University of Naples Federico II, Italy 	SDG3
Pharmacy	Aston University, Birmingham, UK 	SDG3
	Kingston University, London, UK 	SDG3
	The University of Naples Federico II, Italy 	SDG3
	Royal Institute of Technology KTH – Sweden 	SD3
Physical Therapy	Goethe' University , Frankfurt, Germany 	SDG3
STEM	Royal Institute of Technology KTH – Sweden 	SDG6, SDG7, SDG11, SDG12, SDG13
	Heilbronn University HHN - Germany 	SDG6, SDG7, SDG11, SDG12, SDG13
	Tomas Bata University (TBU), Czech Republic 	SDG6, SDG7, SDG11, SDG12, SDG13
	University of Alabama in 	SDG6, SDG7, SDG11, SDG12, SDG13

	Birmingham, USA		
	Hunan Agriculture University - China		SDG6, SDG7, SDG11, SDG12, SDG13
Humanities (business and entrepreneurship)	JAMK University of Applied Sciences, Finland		SDG8, SDG9
	Technological University Dublin (TU Dublin), Ireland		SDG8
	Heilbronn University HHN - Germany		SDG8
	Tomas Bata University (TBU), Czech Republic		SDG8
Humanities (Law)	Sciences Po Lille - France		SDG16
Humanities (Art and design)	Kingston University, London, UK		SDG11
Humanities (Optometry)	Aston University, Birmingham, UK		SDG3
Humanities (Tourism)	JAMK University of Applied Sciences, Finland		SFG9, SDG11
	Lincoln University College, Malaysia		SDG9, SDG11
	University of Missouri-Kansas City (UMKC), USA		SDG9.SDG11

Humanities (Mass communication)	East Carolina University, USA 	SDG17
Humanities (Languages)	The British Council 	
	Norwich Institute for Language Education, UK 	
	Universidad De Castilla- La Mancha-Spain 	SDG5, SDG17
	Cambridge- ESOL (English Language Centre (ELC)) 	SDG5, SDG17
	Beijing Languages and Culture University (BLCU), China 	SDG5, SDG17
	Guangdong University of Foreign studies Guangdong University of Foreign studies, China 	SDG5, SDG17
	AMIDEAST 	SDG5, SDG17
	University of Leicester 	SDG5, SDG17

MOUs in Other disciplines

Agence Universitaire Francophonique 	
Salamanca University, Spain 	

Institute Of International Education (Lotus Program)	
USAID projects	
Aristotle University of Thessaloniki, Greece	
University of Eastern Finland UEF	
University Senghor, Alexandria	

Table 31. Collaboration of Pharos University with Ministries, Governmental Agencies, Industrial Companies and Embassies

Institute of Cultural Affairs
Spanish embassy/ consulate
American embassy/ consulate
French embassy/ consulate
British embassy/ consulate
Chinese embassy/ consulate

VIII. International Mobilities in SDGs

International Mobilities in SDG 3 Good Health and Wellbeing

Name	Title	Faculty- PUA	Host university	Travel Dates
Samar ossama El-ganainy	Lecturer	Faculty of Pharmacy Pharmacology &Therapeutics Department	University of Eastern Finland (Finland).	24 April 2019 to 3 May 2019
Mennatallah Ahmed Ismail Ali	Lecturer	Faculty of Pharmacy Pharmacology &Therapeutics Department	University of Eastern Finland (Finland).	24 April 2019 to 3 May 2019
Mohamed Gamal Bekhit	PhD student	Faculty of Pharmacy Pharmaceutical Chemistry Department	University of Eastern Finland (Finland).	1 March2019 To 31 May2019

International Mobilities in SDG 8 : Decent Places and Economic Growth

Name	Title	Faculty- PUA	Host university	Travel Dates
Mayssa Mahmoud Abdelsalam Abdallah Elmofty	Assistant Lecturer	Financial and Administrative Sciences	(TU DUBLIN)- Ireland	22 September 2019 to 6 October 2019
Riham Hassan Mahmoud Younis	Assistant Lecturer	Financial and Administrative Sciences	(TU DUBLIN)- Ireland	22 September 2019 to 6 October 2019
Irene Robert Dicran Balian	Teacher assistant	Faculty of Financial and Administrative Sciences	(TU DUBLIN) Ireland	1 February 2020 to 12 February 2020
Omneya Mohamed Moharam Aly	Teacher assistant	Faculty of Financial and Administrative Sciences	(TU DUBLIN) Ireland	1 February 2020 to 12 February 2020

Name	Title	Faculty- PUA	Host university	Travel Dates
Sara Hussein Fahmy Mohamed Ahmed	Lecturer	Career Development and Entrepreneurship center	JAMK University Finland	1 June 2019 To 13 June 2019

International Mobilities in SDG 9: Industry, Innovation and Infrastructure

Name	Title	Faculty- PUA	Host university	Travel Dates
Moataz Ehab	Demonstrator	Faculty of Engineering Department of Construction	KTH - Sweden	15 January 2019 15 February 2019
Rita Garbis	Assistant Lecturer	Faculty of Engineering Mechanical Engineering Department	KTH - Sweden	30 March 2019 to 10 April 2019

Engy Elnayal	Lecturer	Faculty of Engineering Electrical Department	KTH - Sweden	20 March 2019 To 18 April 2019
Mohamed abdelkarim	Lecturer	Faculty of Engineering Electrical Department	KTH - Sweden	12 March 2019 To 23 March 2019
Moustafa Mohamed Mohamed Elsayed	Lecturer	Faculty of Engineering Basic Sciences Department	University of Oradea Romania	15 December 2019 to 21 December 2019.

International Mobilities in SDG 11: Sustainable cities

Through MOUs , the Faculty of Arts and design nominated the Teaching assistant as indicated in the table below to travel to Aristotle university for training in the filed of arts and design. The candidate spent most of the time in the host university to see how the curricula in Pharos university can be developed to match the international standards and sustainable development. On his return, he was able to make changes to some topics in the undergraduate curricula to infuse sustainability to the program. Staff members – Erasmus+ (2019-2020).

Name	Title	Faculty- PUA		Host university	Travel Dates
Mohamed Osama	Teaching Assistant	Faculty of Arts and design Department of Décor		Aristotle University Greece	15 April 2019 to 19 April 2019

International Mobilities in SDG 14: Life below water

Through MOUs, The faculty of Tourism nominated its candidate to travel to JAMK University for training and exploring cultural heritage in indigenous coastal areas and ways and means of using the life under water for tourist attraction particularly in the areas of south Sinai and the Red sea coast.

Name	Title	Faculty- PUA	Host university	Travel Dates
Tamer Mohamed AbdelRaouf Hassan	Lecturer	Faculty of Tourism and Hotel Management	JAMK University Finland	1 June 2019 To 13 June 2019

International Mobilities in SDG 16:

Through MOUS, the faculty of legal studies and international relations nominated an associate professor to travel to Aristotle university to spread the notion of water politics and water rights in the national and international law. The candidate delivered few lectures to students and staff of Aristotle university and explored means and ways of communication in the field of human rights.

Name	Title	Faculty- PUA	Host university	Travel Dates
Walid Fahmy	Associate Professor	Faculty of Legal Studies & International Relations Department of Public International Law	Aristotle University of Thessaloniki	26 May 2019 to 1 June 2019

IX. Students Research Projects in Relevant SDGs

Students Projects Relevant to SDG 7:

Project name	Summary
1. Natural Fibers	The usage of natural resources will play a leading role in the sustainable development of the cement and concrete industry during this century. Plant-based natural fibers are used more increasingly in construction materials. Despite the low-cost of such environmentally friendly renewable material, it has the ability to enhance the mechanical properties of construction materials. This project presents extensive experiments on the use of plant based natural fibers as reinforcement for cement-based composites, with a particular emphasis upon fiber types; fiber characteristic, and fiber-cement composites performance
2. Solar PV pumps for sustainable irrigation in Egypt	This project represents a comprehensive design of photovoltaic water pumping system powered entirely by solar energy with object of conserving electricity by reducing the usage of grid power and conserving water by reducing water losses. Proposed system is easy to implement and environment friendly solution for irrigation fields as well as requires minimal maintenance and attention and is self-starting.
3. Design and optimization of solar collectors' network for swimming pool heating application	This project presents a general procedure for designing and optimizing the arrangement of solar collectors of swimming pool heating applications using TRNSYS software. The optimal arrangement of the solar collectors for thermal applications requires a merge between thermal and hydraulic objectives. For the thermal side, the working fluid must provide the heat load for the swimming pool at the specified temperature also for the hydraulic side the fluid must flow through the system facing a pressure drop within the specified limits. In this project, the overall arrangement of solar collectors which forms the total collector surface area is named by the (solar collector's network). This network will be practically applied on a swimming pool as a case study for this project. In addition to, an experimental model of a solar heater is constructed to fit the swimming pool.
4. Design, Modeling and performance analysis of solar still	Two identical conventional solar still have been fabricated and will be assembled. For enhancing the freshwater yield, we used some parameters on solar still like a black aluminum sheets fins fixed on a black Basin (steel, 80*50*10 cm, thickness 6 mm). The transparent glass covers of 5mm thickness were placed at an inclination of 30° to the horizontal. Moreover, we used absorbing material like a black dye and sensible heat storage material on different water depth (20mm, 30mm and 40mm). Also, modeling has been carried out aided by some basic and simplified hypotheses, according to overall thermal energy balances on glass, water mass and basin. while taking into consideration an atmospheric condition such as temperatures, humidity, and solar intensity as well as wind speed.
5. Design and optimization of solar collectors' network for swimming pool heating application	This project presents a general procedure for designing and optimizing the arrangement of solar collectors of swimming pool heating applications using TRNSYS software. The optimal arrangement of the solar collectors for thermal applications requires a merge between thermal and hydraulic objectives. For the thermal side, the working fluid must provide the heat load for the swimming pool at the specified temperature also for the hydraulic side the fluid must flow through the system facing a pressure drop within the specified limits. In this project, the overall arrangement of solar collectors which forms the total collector surface area is named by the (solar collector's network). This network

	will be practically applied on a swimming pool as a case study for this project. In addition to, an experimental model of a solar heater is constructed to fit the swimming pool.
6. Design, Modeling and performance analysis of solar still	Two identical conventional solar still have been fabricated and will be assembled. For enhancing the freshwater yield, we used some parameters on solar still like a black aluminum sheets fins fixed on a black Basin (steel, 80*50*10 cm, thickness 6 mm). The transparent glass covers of 5mm thickness were placed at an inclination of 30° to the horizontal. Moreover, we used absorbing material like a black dye and sensible heat storage material on different water depth (20mm, 30mm and 40mm). Also, modeling has been carried out aided by some basic and simplified hypotheses, according to overall thermal energy balances on glass, water mass and basin. while taking into consideration an atmospheric condition such as temperatures, humidity, and solar intensity as well as wind speed.
7. Design and optimization of solar collectors' network for swimming pool heating application	This project presents a general procedure for designing and optimizing the arrangement of solar collectors of swimming pool heating applications using TRNSYS software. The optimal arrangement of the solar collectors for thermal applications requires a merge between thermal and hydraulic objectives. For the thermal side, the working fluid must provide the heat load for the swimming pool at the specified temperature also for the hydraulic side the fluid must flow through the system facing a pressure drop within the specified limits. In this project, the overall arrangement of solar collectors which forms the total collector surface area is named by the (solar collector's network). This network will be practically applied on a swimming pool as a case study for this project. In addition to, an experimental model of a solar heater is constructed to fit the swimming pool.
8. Smart campus	This project is still proceeding in the academic year 2020/2021 and it aims to construct a smart system for the life of students and staff members in university campus. It helps the education process and provides facilities to check attendance. It also allows students to enter the campus and study rooms with a smart card that can also be used for fees payment.

Students Projects Relevant to SDG 9

Project name	Summary
1. Natural Fibers	The usage of natural resources will play a leading role in the sustainable development of the cement and concrete industry during this century. Plant-based natural fibres are used more increasingly in construction materials. Despite the low-cost of such environmentally friendly renewable material, it has the ability to enhance the mechanical properties of construction materials. This project presents extensive experiments on the use of plant based natural fibres as reinforcement for cement-based composites, with a particular emphasis upon fibre types; fibre characteristic, and fibre-cement composites performance
2. Smart campus	This project is still proceeding in the academic year 2020/2021 and it aims to construct a smart system for the life of students and staff members in university campus. It helps the education process and provides facilities to check attendance. It also allows students to enter the campus and study rooms with a smart card that can also be used for fees payment.
3. Smart traffic light	(SDG 11) Make cities and human settlements inclusive, safe, resilient and sustainable

4. Smart campus	This project is still proceeding in the academic year 2020/2021 and it aims to construct a smart system for the life of students and staff members in university campus. It helps the education process and provides facilities to check attendance. It also allows students to enter the campus and study rooms with a smart card that can also be used for fees payment.
5. Design a solar hybrid air conditioning compressor system	Statistics these days say that electricity demand increase in air conditioning system, due to increasing in temperature in the most of countries, so people suffer from high electricity bills. Integrate solar devices or systems to use heat gain from sun to get electricity, and devices that we can use {photovoltaic, solar collector, hybrid system}.The electricity produced can be used to operate compressor that used for compressing the refrigerant in air conditioning system .Three system mentioned above, we should select the best system that give low electricity demand and high efficiency .
6. Solar trackers for hybrid power supply	This project represents a smart power supply by using solar energy as the sources. It reduces the Use of other sources in order to achieve our goal to generate electricity (during day time). The solar tracker device equipped with the project which is absorbs the ultraviolet (UV) from the sun in maximum condition. The tracker operates with single axis rotation where it can be rotating horizontal. This circuit is activated when light dependent resistor (LDR) detecting the sunshine where four sensors are placed at north and south position.
7. Public Transportation System	This project was done in the academic year 2019/2020 and its main goal was to design a smart system for public transport. The system uses GPS and GSM system to determine the exact location of vehicle and collect data to provide people with the best choice of public transport to use. The system saves time and money and helps in the concept of building smart cities and includes several industrial innovations. (SDG 11) Make cities and human settlements inclusive, safe, resilient and sustainable (SDG 9) Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
8. Brain Controlled Smart Wheelchair Based on Mental Task Classification	This project was done in the academic year 2019/2020. The main objective of the project is to help people that were born with the inability to move or had experienced accidents, which led to their loss of this ability. Such situation negatively affected their lives and made them in a permanent need for those who take care of them. The project used technologies to allow these people to control wheel chair via their brain function. (SDG 9) Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation. (SDG 3) Ensure healthy lives and promote well-being for all at all ages
9. Smart campus	This project is still proceeding in the academic year 2020/2021 and it aims to construct a smart system for the life of students and staff members in university campus. It helps the education process and provides facilities to check attendance. It also allows students to enter the campus and study rooms with a smart card that can also be used for fees payment.

Projects of students Relevant to SDG 10:

Project name	Summary
1. Brain Controlled Smart Wheelchair Based on Mental Task Classification	This project was done in the academic year 2019/2020. The main objective of the project is to help people that were born with the inability to move or had experienced accidents, which led to their loss of this ability. Such situation negatively affected their lives and made them in a permanent need for those

	<p>who take care of them. The project used technologies to allow these people to control wheel chair via their brain function.</p> <p>(SDG 9) Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.</p> <p>(SDG 3) Ensure healthy lives and promote well-being for all at all ages</p>
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Projects of students Relevant to SDG 11:

Project name	Summary
1. Water and wastewater	<p>Wastewater treatment is a process, which is being done on the wastewater to change its quality for drinking or other suitable purposes. Wastewater treatment takes place in wastewater treatment plants, which should be designed under different circumstances. The project contains:</p> <ol style="list-style-type: none"> 1- Design intake sum pump unit. 2- Design sedimentation tank. 3- Design filtration tank. 4- Design sludge treatment process. 5- Take a case study in a new compound city.
2. Electrical design of residential compound area with management of distributed generation and optimum power quality performance by load demand side	<p>The aim of this power system project is to help the student in his final B.E. graduation project to apply what he has learned in the field of power systems under graduate courses. The materials included in the following requirements of the design project shall be calculated and prepared in the same structure of the typical professional jobs of electrical engineering works according to the roles of IEC standard codes.</p>
3. IoT approach for sustainable green campus	<p>This project proposes a complete layout for a smart green campus using IoT as a core technology. This project highlights several main features of green campus such as energy saving and efficiency water consumption. The communication technologies that will be implemented in the project layout will be RFID, Bluetooth and cloud computing. Moreover, some prototypes will be designed to validate the proposed layout</p>
4. Design a solar hybrid air conditioning compressor system	<p>Statistics these days say that electricity demand increase in air conditioning system, due to increasing in temperature in the most of countries, so people suffer from high electricity bills. Integrate solar devices or systems to use heat gain from sun to get electricity, and devices that we can use {photovoltaic, solar collector, hybrid system}.The electricity produced can be used to operate compressor that used for compressing the refrigerant in air conditioning system .Three system mentioned above, we should select the best system that give low electricity demand and high efficiency .</p>
5. Solar trackers for hybrid power supply	<p>This project represents a smart power supply by using solar energy as the sources. It reduces the Use of other sources in order to achieve our goal to generate electricity (during day time). The solar tracker device equipped with the project which is absorbs the ultraviolet (UV) from the sun in maximum condition.</p> <p>The tracker operates with single axis rotation where it can be rotating horizontal. This circuit is activated when light dependent resistor (LDR) detecting the sunshine where four sensors are placed at north and south position.</p>

6. Smart traffic light	(SDG 11) Make cities and human settlements inclusive, safe, resilient and sustainable
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Projects of students Relevant to SDG 12:

Project name	Summary
1. Recycling of fabric scrap	The importance of recycling textiles is increasingly being recognized. The purpose. Once in landfills, natural fibers can take hundreds of years to decompose. They may release methane and CO ₂ gas into the atmosphere. Additionally, synthetic textiles are designed not to decompose. In the landfill, they may release toxic substances into groundwater and surrounding soil. The synthetic fiber raw materials totally imported from outside as polyester and nylon and the annual consumption is 440 thousand tons and the recycling processes are not applicable, so the new technology for recycling this scrap is value added materials

Projects of students Relevant to SDG 13:

Project name	Summary
1. Recycling of fabric scrap	The importance of recycling textiles is increasingly being recognized. The purpose. Once in landfills, natural fibers can take hundreds of years to decompose. They may release methane and CO ₂ gas into the atmosphere. Additionally, synthetic textiles are designed not to decompose. In the landfill, they may release toxic substances into groundwater and surrounding soil. The synthetic fiber raw materials totally imported from outside as polyester and nylon and the annual consumption is 440 thousand tons and the recycling processes are not applicable, so the new technology for recycling this scrap is value added materials

X. Collaborations and Research Publications contributing to SDGs

Pharos University contributed to by research relevant to several SDGs. In total, in 2019, and according to SCOPUS data there are 93 indexed publications as shown in the table below. The following is a summary of these publications:

SDG OF CONCERN	NO. OF PUBLICATIONS
SDG 3. GOOD HEALTH AND WELLBEING	63
SDG 6. CLEAN WATER AND SANITATION	3
SDG7. AFFORDABLE ENERGY	4
SDG9. INDUSTRY INNOVATION AND INFRASTRUCTURE	20
SDG11. SUSTAINABLE CITIES	2
SDG12. RESPONSIBLE CONSUMPTION PRODUCTION	1

The co-authorship in the publications are due to collaborations with national, Regional and international universities and research institutions. The Table below shows these these intitutions and the number of Publications

Level of collaboration	Name of Institution	Relevant SDG	No. of publication
Local	Alexandria University	SDG3	41
		SDG6	1
		SDG9	8
		SDG11	1
		SDG15	1
	Cairo University	SDG3	4
	Ain shams University	SDG3	2
	Tanta University	SDG3	1
	Menofia University	SDG9	2
	Minia University	SDG9	1
	Damahur university	SDG3	1
	Azhar University	SDG9	1
	Aswan University	SDG3	1
	Arab Academy	SDG3	1
		SDG9	1
	Egyptian Japanese University	SDG3	9
		SDG7	1
	Higher Institute of Technology	SDG9	1
	Higher institute of fishery	SDG3	1
	Agriculture research center	SDG15	1
	Future University	SDG3	1
	Zeweil City	SDG9	1
	City of Science and Technology	SDG3	2
SDG9		1	
6 October University	SDG3	1	
Nile university	SDG3	1	
Subtotal	19 National University and research centers		
Regional	American University of Beirut – Lebanon	SDG3	3
		SD6	1
		SDG9	2
		SDG15	1
	Banghazi University- Libya	SDG3	
Prince Sattam Bin Abdul Aziz , KSA	SDG3	1	

	King Abdul Aziz university – KSA	SDG3	1
	King Fahd University of Petroleum	SDG7	1
	Amman University- Jordan	SDG3	1
	Kuwait University	SDG3	
	Sanaa University – Yemen	SDG9	1
	United Arab Emirates university	SDG9	1
		SDG3	1
	Turkey University	SDG9	1
Subtotal	10 Regional Universities		
International	Fraunhofer institute for molecular biology- Germany	SDG3	1
	Munchen insituto de investigacion - Germany	SDG3	1
	University of Leipzig - Germany	SDG3	1
	University of Adelaide- Australia	SDG3	1
	Queensland university- Monach - Autralia	SDG3	1
	University of Innsbruck- Austria	SDG9	1
	Universidad de Navarra - Spain	SDG3	1
	University of Eastern Finland- Finland	SDG3	1
	University of Genoa- Italy	SDG3	1
	Queen Elizabeth Hospital , Dept. of clinical Oncology- Know;oon , Honlong- China	SDG3	1
	Hokkaido University- Japan	SDG3	1
	Elizabeth University- Malaysia	SDG3	1
	University of Teknologi Petonas- Malayia	SDG3	1
	University Putra - Malaysia	SDG9	1
	Old Dominion university- USA	SDG9	1
	University of Illinois - Chicago	SDG3	1
	South Dakota State university- USA	SDG3	1
	Calgary University - Canada	SDG3	1
Subtotal	18 International University		
Total	47 university and research institution		

Publications in SDG 3

1	A Novel Morphological Analysis of DXA-DICOM Images by Artificial Neural Networks for Estimating Bone Mineral Density in Health and Disease
	Mohamed, E.I., Meshref, R.A., Abdel-Mageed, S.M., Moustafa, M.H., Badawi, M.I., Darwish, S.H.
	Collaboration with Alexandria University
2	Co-targeting of endothelin-A and vitamin D receptors: a novel strategy to ameliorate cisplatin-induced nephrotoxicity
	Abdel Moneim, L.M., Helmy, M.W., El-Abhar, H.S
	Collaboration with Cairo University
3	Effect of using zirconia and metallic bar attachment overdentures on the supporting structures of mandibular edentulous ridge area (Randomized control trial) (2019) Indian Journal of Public Health Research and Development, 10 (9), pp. 1150-1155. 20)
	Debis, M.Z., Badr, A.I., Agamy, E.M., Mohamed, G.F.
	Collaboration with Minia University
4	Opportunistic parasitoses among Egyptian hemodialysis patients in relation to CD4+ T-cell counts: A comparative study
	Shehata, A.I., Hassanein, F., Abdul-Ghani, R.
	Collaboration with Alexandria University, and Sanaa University
5	Role of TGF- β 1 and C-Kit Mutations in the Development of Hepatocellular Carcinoma in Hepatitis C Virus-Infected Patients: in vitro Study
	El-Houseini, M.E., Ismail, A., Abdelaal, A.A., El-Habashy, A.H., Abdallah, Z.F., Mohamed, M.Z., El-Hadidi, M., Cho, W.C.S., Ahmed, H., Al-Shafie, T.A.
	Collaboration with Kowloon Hong Kong China, Queen Elizabeth Hospital, GlycoMantra, Cairo University, Ain Shams University
6	Synthesis and biological evaluation of purine-pyrazole hybrids incorporating thiazole, thiazolidinone or rhodanine moiety as 15-LOX inhibitors endowed with anticancer and antioxidant potential
	Afifi, O.S., Shaaban, O.G., Abd El Razik, H.A., Shams El-Dine, S.E.-D.A., Ashour, F.A., El-Tombary,
	Collaboration with City of Scientific Research and Technological Applications, and Alexandria University
7	Synthesis and molecular docking study of some 3,4-dihydrothieno[2,3-d]pyrimidine derivatives as potential antimicrobial agents
	Shaaban, O.G., Issa, D.A.E., El-Tombary, A.A., Abd El Wahab, S.M., Abdel Wahab, A.E., Abdelwahab, I.A.
8	Professional boundaries.
	Elnaem, M.H., Hamdy, N.A.
	Collaboration with INTERNATIONAL ISLAMIC Institute of Malaysia
9	Shooting three inflammatory targets with a single bullet: Novel multi-targeting anti-inflammatory glitazones (2019) European Journal of Medicinal Chemistry, 167, pp. 562-582. Cited 5 times.
	Elzahhar, P.A., Alaaeddine, R., Ibrahim, T.M., Nassra, R., Ismail, A., Chua, B.S.K., Frkic, R.L., Bruning, J.B., Wallner, N., Knape, T., von Knethen, A., Labib, H., El-Yazbi, A.F, Belal, A.S.F.

	Collaboration with Alexandria university, American University of Beirut, Beirut, Lebanon, The University of Adelaide, Adelaide, South Australia, Fraunhofer Institute for Molecular Biology and , Faculty of Medicine, Goethe-University Applied Ecology
10	A combined treatment of curcumin, piperine, and taurine alters the circulating levels of IL-10 and miR-21 in hepatocellular carcinoma patients: A pilot study Hatab, H.M., Abdel Hamid, F.F., Soliman, A.F., Al-Shafie, T.A., Ismail, Y.M., El-Houseini, M.E. Collaboration with Ain Shams university , Cairo university
11	A new design for a chronological release profile of etodolac from coated bilayer tablets: In-vitro and in-vivo assessment. Georgy, K.R., Farid, R.M., Latif, R., Bendas, E.R. Collaboration with Future university, Cairo university
12	A novel investigation of statins myotoxic mechanism: effect of atorvastatin on respiratory muscles in hypoxic environment El-Ganainy, S.O., El-Mallah, A., Abdallah, D., Khattab, M.M., El-Khatib, A.S., Mohy El-Din, M.M. Collaboration with Alexandria University, Cairo University
13	A novel voltammetry offline coupled MALDI/TOF MS characterization of electrochemical reaction products and the voltammetric determination of febuxostat in human plasma El-Yazbi, F.A., Amin, O.A., Bakry, R., Khamis, E.F., El-Kimary, E.I., Younis, S.E. Collaboration with University of Innsbruck, Alexandria University
14	An Initial Demonstration of Polyester Monomer Coordination Properties: Synthesis and Biological Activity of Metal Complexes Derived from a New Nanosized Diol Elhousseiny, A.F., Hussien, H.M., Hassan, H.H.A.M. Collaboration with Alexandria University
15	Anionic versus cationic liposomes as oral nanocarriers for enhanced delivery of the hydrophilic drug Elnaggar, Y.S.R., Omran, S., Hazzah, H.A., Abdallah, O.Y Collaboration with Alexandria University
16	Assessment of Osteoimmunological Changes Following Orthognathic Surgery Soliman, S., Dehis, M., Ahmed, M., Kateeb, E.E.L. Pharos University
17	Astrocyte-Targeted Transporter-Utilizing Derivatives of Ferulic Acid Can Have Multifunctional Effects Ameliorating Inflammation and Oxidative Stress in the Brain Ahmed Montaser, ¹ Johanna Huttunen, ¹ Sherihan Abdelhamid Ibrahim, ² and Kristiina M. Huttunen Collaboration with Eastern Finland
18	Clarithromycin resistance and genetic pattern of helicobacter pylori in a group of patients with peptic ulcer disease in alexandria, Egypt Alhammad, M.A., El-Kady, H., Hamed, Y. Collaboration with Universiti Teknologi PETRONAS, Alexandria university , Benghazi University

19	Clarithromycin resistance and genetic pattern of helicobacter pylori in a group of patients with peptic ulcer disease in alexandria, Egypt
	Alhammad, M.A., El-Kady, H., Hamed, Y.
	Collaboration with American University of Beirut, Alexandria university
20	Comparison of remineralization by fluoride varnishes with and without casein phosphopeptide amorphous calcium phosphate in primary teeth
	64) Salman, N.R., ElTekeya, M., Bakry, N., Omar, S.S., El Tantawi, M.
	Collaboration with Alexandria University
21	Comparison of the effects of short-duration wrist joint splinting combined with physical therapy and physical therapy alone on the management of patients with lateral epicondylitis.
	Kachanathu, S.J., Alenazi, A.M., Hafez, A.R., Algarni, A.D., Alsubiheen, A.M.
	Collaboration with Prince Sattam bin Abdulaziz University ,King Saud university
22	Controlled release Ibu-cryobarriers for the prevention of post-operative adhesions: In-vitro/in-vivo comparative study
	Ezzat, H.M., Elnaggar, Y.S.R., Abdallah, O.Y.
	Collaboration with Alexandria university
23	Correlation study of functional performance between diabetic and non-diabetic patients with knee osteoarthritis
	Hamed, A.M., Aboeleinen, M.H., Abdelgawad, H.A., Aboelazm, S.N
	Collaboration with Misr International University
24	Current strategies for different paclitaxel-loaded Nano-delivery Systems towards therapeutic applications for ovarian carcinoma: A review article
	Khalifa, A.M., Elsheikh, M.A., Khalifa, A.M., Elnaggar, Y.S.R
	Collaboration with Alexandria University
25	Dental management of a child with ectrodactyly ectodermal dysplasia cleft lip/palate syndrome: A case report
	Elhamouly, Y., Dowidar, K.M.L.
	Collaboration with Alexandria University
26	Design, synthesis and biological evaluation of novel α -acyloxy carboxamides via Passerini reaction as caspase 3/7 activators
	Salah Ayoup, M., Wahby, Y., Abdel-Hamid, H., Ramadan, E.S., Teleb, M., Abu-Serie, M.M., Noby, A.
	Collaboraton with Alexandria University, City of Scientific Research and Technological Applications
27	Design, synthesis and pharmacological evaluation of some substituted dihydropyrimidines with L-/T-type calcium channel blocking activities
	Teleb, M., Rizk, O.H., Zhang, F.-X., Fronczek, F.R., Zamponi, G.W., Fahmy, H.
	Collaboration with Institute, University of Calgary, Alexandria University, South Dakota State University
28	Diosmin Nanocrystal-Loaded Wafers for Treatment of Diabetic Ulcer: In Vitro and In Vivo Evaluation
	Atia, N.M., Hazzah, H.A., Gaafar, P.M.E., Abdallah, O.Y.

	Collaboration with Alexandria University, Arab Academy for Science, Technology and Maritime Transport
29	Dual VEGFR-2/PIM-1 kinase inhibition towards surmounting the resistance to antiangiogenic agents via hybrid pyridine and thienopyridine-based scaffolds: Design, synthesis and biological evaluation (2019) Bioorganic Chemistry, 92, art. no. 103189, . Rizk, O.H., Teleb, M., Abu-Serie, M.M., Shaaban, O.G.
	Collaboration with Alexandria University
30	Eco-Friendly Tadalafil Surfactant-Free Dry Emulsion Tablets (SFDETs) Stabilized by In Situ Self-Assembled Aggregates of Natural Oil and Native Cyclodextrins Badr-Eldin, S.M., Labib, G.S., Aburahma, M.H.
	Collaboration with Alexandria University, King Abdulaziz University
31	Effect of local administration of simvastatin on orthodontic tooth movement in rabbits AlSwafeeri, H., ElKenany, W., Mowafy, M., Karam, S.
	Collaboration with Alexandria University
32	Effect of using distal extension bar on the posterior ridge area in implant supported mandibular overdentures Abdel Hamid, S.M., Hamzawi, A.G., Agamy, E.M., Mohamed, G.F
	Collaboration with Minia University
33	Effect of visceral decongestion of true pelvis on primary dysmenorrhea Atef, A.M., Awad, M.A., Emara, H.M., Kamel, H.E.D.H.
	Collaboration with Alexandria University
34	Emergence of bla _{VEB} and bla _{GES} among VIM-producing Pseudomonas aeruginosa clinical isolates in Alexandria, Egypt Gaballah, A., Elbaradei, A., Elsheredy, A., Kader, O.
	Collaboration with Alexandria University
35	Enhanced production of di-(2-ethylhexyl) phthalate (DEHP) by Bacillus subtilis AD35 using response surface methodology (RSM) Lotfy, W.A., Hassan, S.W.M., Abd El-Aal, A.A., Ghanem, K.M.
	Collaboration with Alexandria University, and National Institute of Oceanography and Fisheries
36	Evaluating the therapeutic potential of one-carbon donors in nonalcoholic fatty liver disease Bakir, M.B., Salama, M.A., Refaat, R., Ali, M.A., Khalifa, E.A., Kamel, M.A.
	Collaboration with Alexandria University
37	Formulation strategies for achieving high delivery efficiency of thymoquinone-containing Nigella sativa extract to the colon based on oral alginate microcapsules for treatment of inflammatory bowel disease Samak, Y.O., Santhanes, D., El-Massik, M.A., Coombes, A.G.A.
	Collaboration with Queensland university, Monash university, Queen Elizabeth university

38	Improved oral bioavailability of the anticancer drug catechin using chitosomes: Design, in-vitro appraisal and in-vivo studies
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43	Maxillary sinus floor elevation using hydroxyapatite nano particles vs tenting technique with simultaneous implant placement: A randomized clinical trial
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44	Mechanistic role of cAMP and hepatocyte growth factor signaling in thioacetamide-induced nephrotoxicity: Unraveling the role of platelet rich plasma
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45	Mesoporous silica nanoparticles, a safe option for silymarin delivery: preparation, characterization, and in vivo evaluation
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46	Micro- and nanotechnology approaches to improve Parkinson's disease therapy
	Torres-Ortega, P.V., Saludas, L., Hanafy, A.S., Garbayo, E., Blanco-Prieto, M.J.
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47	Reviewing two decades of nanomedicine implementations in targeted treatment and diagnosis of pancreatic cancer: An emphasis on state of art
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53	Structurally Diverse Histone Deacetylase Photoreactive Probes: Design, Synthesis, and Photolabeling Studies in Live Cells and Tissue
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55	Successful treatment of acute experimental toxoplasmosis by spiramycin-loaded chitosan
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57	Synthesis of some new C2 substituted dihydropyrimidines and their electrophysiological evaluation as L-/T-type calcium channel blockers
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58	Synthesis, antibacterial evaluation, and DNA gyrase inhibition profile of some new quinoline hybrids
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60	The possible antidiabetic effects of vitamin D receptors agonist in rat model of type 2 diabetes
	Abdel-Rehim, W.M., El-Tahan, R.A., El-Tarawy, M.A., Shehata, R.R., Kamel, M.A.
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61	The role of $\alpha 7nAChR$ in controlling the anti-inflammatory/anti-arthritis action of galantamine
	Gowayed, M.A., Rothe, K., Rossol, M., Attia, A.S., Wagner, U., Baerwald, C., El-Abhar, H.S., Refaat, R.
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63	Volatile organic compounds of biofluids for detecting lung cancer by an electronic nose based on artificial neural network
	Mohamed, E.I., Mohamed, M.A., Abdel-Mageed, S.M., Abdel-Mohdy, T.S., Badawi, M.I., Darwish, S.H.
	Alexandria university, October 6 university

Publications in SDG 6:

1	Removal of Zinc from Aqueous Solution Using Activated Oil Shale
	Ehssan Nassef, Yehia Eltaweel
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2	Synthesized silver carbon nanotubes and zinc oxide nanoparticles and their ability to remove methylene blue dye (2019) Journal of Nano Research, 56, pp. 1-16. Cited 3 times.
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3	Removal of Zinc from Aqueous Solution Using Activated Oil Shale
	Ehssan Nassef, Yehia Eltaweel
	Alexandria university

Publications in SDG 7:

1	A New Self-Synchronized Strategy for Grid-Connected Three Phase Voltage Source Inverters
	Aboushal, M.A., Moustafa, M.M.Z., El-Gammal, M.A
	Alexandria University
2	Hybrid energy-efficient protocol in delay tolerant networks for IoT systems
	Elsaadany, A., Aboulhassan, M.
	Pharos University in Alexandria

3	Performance Analysis and Power Optimization for Spectrum-Sharing Mixed RF/FSO Relay Networks with Energy Harvesting
	El-Malek, A.H.A., Aboulhassan, M.A., Salhab, A.M., Zummo, S.A.
	Japan University of Science and Technology, King Fahd University of Petroleum & Minerals, Dhahran
4	The ability of forecasting flapping frequency of flexible filament by artificial neural network
	Fayed, M., Elhadary, M., Ait Abderrahmane, H., Zakher, B.N.
	American University of the Middle East, Khalifa University of Science and Technology,

Publications in SDG 9:

1	Heat transfer enhancement in a radial turbulent sink flow cooling system
	Sorour, M.M., Fayed, M., El-Din, N.A.
	Alexandria University
2	A Coherent Performance for Noncoherent Wireless Systems Using AdaBoost Technique
	Gamal, H., Ismail, N.E., Rizk, M.R.M., Khedr, M.E., Aly, M.H.
	Arab Academy for Science Technology, Alexandria university
3	A novel nanocomposite of Liquidambar styraciflua fruit biochar-crosslinked-nanosilica for uranyl removal from water
	Mahmoud, M.E., Khalifa, M.A., El Wakeel, Y.M., Header, M.S., El-Sharkawy, R.M., Kumar, S.,
	Old Dominion University, Alexandria University
4	A System Dynamics Model of Apparel Supply Chain Under Mass Customization
	Issa, M., Elgholmy, S., Sheta, A., Fors, M.N.
	Alexandria university
5	ArMTFr: a new permutation-based image encryption scheme
	Elkamchouchi, H., Salama, W.M., Abouelseoud, Y.
	Alexandria University
6	Biodegradation of Petroleum Oil Effluents and Production of Biosurfactants: Effect of Initial Oil Concentration
	Mostafa, N.A., Tayeb, A.M., Mohamed, O.A., Farouq, R.
	Minia university
7	Design and testing of high-density polyethylene nanocomposites filled with lead oxide micro- and nano-particles: Mechanical, thermal, and morphological properties
	Mahmoud, M.E., El-Khatib, A.M., El-Sharkawy, R.M., Rashad, A.R., Badawi, M.S., Gepreel, M.A.
	Beirut Arab University, Egypt-Japan University of Science and Technology
8	Does engineering of nanoshapes have antibacterial synergy with magnetic signal exposure?
	El-Kaliuoby, M.I., El-Khatib, A.M., Khalil, A.M.

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9	Effect of square pulsed magnetic field exposure on growth kinetics of <i>Dickeya solani</i> Balabel, N.M., El-Kaliuoby, M.I., Khalil, A.M. Alexandria University, Agriculture Research Center
10	Fabrication and characterization of phosphotungstic acid - Copper oxide nanoparticles - Plastic waste nanocomposites for enhanced radiation-shielding Mahmoud, M.E., M.El-Sharkawy, R., Allam, E.A., Elsaman, R., El-Taher, A Al-Azhar University, Alexandria University
11	Graphene Magneto-Electric Antenna on Curved Structures for Millimeter Wave Communications Ghazi, A.M., Hamada, H., Malhat, H.A., Zainud-Deen, S.H Higher Technological Institute, Menoufia University, Badr University
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13	Humans and bots web session identification using k-means clustering Medhat, M., Hassan, Y.F., Elsayed, A. Alexandria university
14	Kinetic study of the esterification of unsaturated free fatty acids Hawash, S.A., Ebrahiem, E.E., Farag, H.A. Alexandria University, Minia University
15	Lupine extract: A promising eco-friendly corrosion inhibitor Zarraa, R.M., Mahgoub, F.M., Hefnawy, A. Alexandria university
16	On the Location of a Constrained k- Tree Facility in a Tree Network with Unreliable Edges Aboutahoun, A.W., Fares, E. Zewail City of Science and Technology
17	Study of some gamma ray attenuation parameters for new shielding materials composed of NANO ZnO blended with high density polyethylene Alsayed, Z., Badawi, M.S., Awad, R., Thabet, A.A., El-Khatib, A.M. Beirut Arab University & Alexandria Univeisty
18	Surface Defects Classification of Hot-Rolled Steel Strips Using Multi-directional Shearlet Features Ashour, M.W., Khalid, F., Abdul Halin, A., Abdullah, L.N., Darwish, S.H. University Putra Malaysia
19	The Effect of Vortex Generators on Aerodynamics for Sedan Cars Bassem Nashaat Zakher, Mostafa El-Hadary, Andrew Nabil Aziz City of Scientific Research and Technological Application , Alexandria university

20	The Modified Fractional Power Series Method for Solving Fractional Non-isothermal Reaction–Diffusion Model Equations in a Spherical Catalyst
	Syam, M.I., Anwar, M.-N.Y., Yildirim, A., Syam, M.M.
	UAE University , Ege UniversityTurkey

Publications in SDG 11:

1	Framework for Interaction between Databases and Microservice Architecture
	Kholy, M.E., Fatatry, A.E.
	Alexandria University
2	IMPACT OF BUILDING REGULATIONS ON THE URBAN FABRIC OF THE CITY: CASE STUDY OF ALEXANDRIA, EGYPT
	NADIA SAMIR, RAMADAN ABD EL MAKSOU, IBRAHIM MAAROF
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Publications in SDG 12:

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	Future University in Egypt