



Damietta University – Faculty of Science



The 6th International Environmental Conference

Climatic Changes and Sustainable Development

2022

New Damietta – Ras ElBar

3-5 October 2022



Enviro Service
Environmental Consultation
And General Services





The 6th International Environmental Conference **Climatic Changes and Sustainable Development**

New Damietta – Ras ElBar 3-5 October 2022

Under the Auspices of

Prof. Dr. Mohamed A. Ashour
Minister of Higher Education
and Scientific Research

Prof. Dr. ElSayed M. Dadour
President of Damietta University

Under Supervision

Prof. Dr. Abdul-Hamid A. Khedr
Vice President for Community
Service Affairs and
Environmental Development

Prof. Dr. Hemdan R. El-Metwaly
Vice President for Postgraduate
Studies and Research

Organizing Committee

Prof. Dr. Mohamed I. Abu Dobra
Dean of Faculty

Conference President

Prof. Dr. Omnya A. El-Batrawy
Vice Dean for Community
Service Affairs and
Environmental Development

Prof. Dr. Kadry A. El-Bakry
Vice Dean for Postgraduate
Studies and Research

Conference Chairman

Conference Secretary



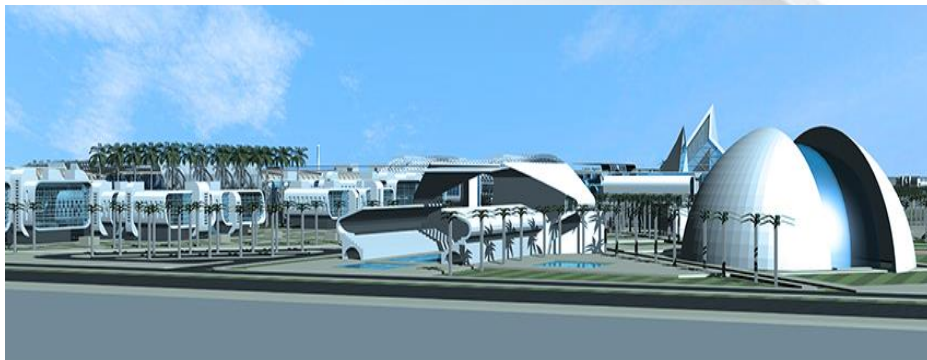


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Damietta University



The idea of opening classes for some faculties of Mansoura University in Damietta came in to light when the number of Mansoura University students from the sons of Damietta increased in the various faculties, then decisions were issued to establish branch faculties according to the regulations of the corresponding faculties at Mansoura University, which were developed later and added many special programs to it, so work began at the Faculty of Education in the academic year 1976-1977, followed by the Faculty of Science and classes for the Faculty of Commerce in the academic year 1985-1986, then the Faculty of Specific Education in the year 90-1991, then the Faculty of Applied Arts in the year 2004-2005, and the Faculties of Agriculture, Arts and Physical Education in the academic year 2006-2007 .

In 2007, Republican Decree No. (276) was issued to establish a branch of Mansoura University in Damietta. At that time, three faculties were located on one campus in the Al-Aasar neighborhood in Damietta, which are the faculties of applied arts, Arts and agriculture. The rest of the five faculties are located in separate places in the New Damietta City, which are the Faculties of Science, Education, Commerce, Specific Education and Physical Education, in addition to branch management, male housing and female housing. In July 2012, Republican Decree No. 19 of 2012 was issued to establish Damietta University, located in the New Damietta City.



About 200 acres have been allocated in the New Damietta City to establish a campus for the university branch in Damietta (when it was affiliated with Mansoura University), and the new university campus includes many different construction stages that serve all the activities of the university.

Damietta University now includes 14 Faculties, and they are: Faculty of Education, Faculty of Science, Faculty of Commerce, Faculty of Specific Education, Faculty of Applied Arts, Faculty of Arts, Faculty of Agriculture, Faculty of Physical Education, Faculty of Engineering, Faculty of Law, Faculty of Archeology, Faculty of Nursing, Faculty of Computing and Artificial Intelligence and Faculty of Medicine

New Damietta City is characterized by its unique location on the international highway which links the governorates of Dakahlia, Kafr El-Sheikh, Albehera, Port Said and the Canal area. The environment surrounding Damietta University is also characterized by its natural, industrial and tourism resources and wealth, which reflects the importance of the role that the university can play in Damietta, given the wide diversity of economic and natural resources in this region, and what this requires in the preparation of distinguished professional and technical cadres that serve the labor market and are in line with the vision of the Egyptian state to achieve sustainable development.



University Administration



Prof. Dr. El-Sayed Mohamad Dadour

University President



**Prof. Dr. Abdel
Hameed Abdulfatah
Khidr**

Vice President for
Community Service and
Environmental
Development Affairs.



**Prof. Dr. Hemdan
Rabea El-Metwaly**

Vice President for
Postgraduate Studies
And Research Affairs



**Prof. Dr. Wael
Farouq El-Taibany**

Vice President for
Academic and
Student Affairs



Faculty of Science



The Faculty of Science, Damietta University, is the edifice of science and knowledge, and it bears the banner of leadership in the fields of basic sciences. The Faculty of Science was established by Republican Decree No. (303) of 1985, and the study began in the academic year 1985/1986 by implementing the regulations of the Faculty of Science, Mansoura University, and continued until the academic year 1990/1991, and the first class graduated at the end of the academic year 1988-1989.

It was taken into account that the study in the Faculty should not be in the old style, but be in keeping with scientific development and to address new problems, the most important of which are the environment. The Faculty of Science includes seven scientific departments: Department of Chemistry - Department of Mathematics - Department of Physics - Department of Botany and Microbiology - Department of Zoology - Department of Geology - Department of Environmental Sciences.



Faculty Administration



Prof. Dr. Mohamed Isamil Abu Dobra

Dean of the Faculty



**Prof. Dr. Kadry
Abl-Kader El-
Bakry**

Vice Dean for
Postgraduate Studies
and Research Affairs



**Prof. Dr. Naser
Abdu ElGhamaz**

Vice Dean for
Academic and Student
Affairs



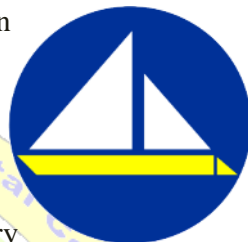
**Prof. Dr. Omnya
Abd Elsalam El-
Batrawy**

Vice Dean for
Community Service
and Environmental
Development Affairs.



Damietta Governorate

Damietta Governorate. It is located in the northeastern part of the country, and has a population of over 1 million. Its capital is the city of Damietta. Damietta (city) is famous for its guava farms, as well as the palm trees that cover the coast from Ras El Bar in the east to Gamasa in the west. The governorate exports millions of palm trees to many countries every year, including Greece and China. Damietta also produces wheat, maize, cotton, rice, potatoes, lemon, grapes and tomatoes. It is also famous for its sweet industry, sardine packing, and Domiati cheese. Ras El Bar, one of the oldest summer resorts in Egypt, is located at the point where The Nile meets the Mediterranean Sea.



New Damietta City

New Damietta is an integrated city, established 30 years ago by the New Urban Communities Authority. It has been an essential tourist attraction and is becoming a huge developmental project with several ongoing housing and service projects. New Damietta is located north of Damietta city, along the Mediterranean coast and 4.5 km away from New Damietta port. The city can easily be reached through the international coastal road connecting the Arab East and the Arab West through Sinai.



Ras ElBar

Ras El Bar, which translates to "head of land", is a resort city in the Governorate of Damietta, Egypt. It is located on the Mediterranean Sea at the mouth of the Damietta Nile branch. There are approximately 25,000 permanent residents in the city. However, during the summer peak holiday season, from July to September, the population quickly expands to over 250,000.



Ras El Bar lies in a peninsula on the coast of the Mediterranean Sea, and it is bordered on the western by the Damietta Nile branch. The area of "Lessan" is located in the extreme northern part of this peninsula, and it is at this point where the Damietta Nile arm flows in the Mediterranean sea, which gives Ras El Bar the shape of a triangle. The climate of Ras El Bar is classified as hot desert (BWh) by Köppen-Geiger system although tempered by the proximity to the Mediterranean Sea.

2022

Faculty of Science - Damietta University



Organizing Committee

Prof. Abdul-Hamid A. Khedr	Vice President for Community Service Affairs and Environmental Development
Prof. Dr. Hemdan R. El-Metwaly	Vice President for Postgraduate Studies and Research
Prof. Mohamed I. Abu Dobar	Conference President Dean of Faculty
Prof. Omnya A. El-Batrawy	Conference Chairman Vice Dean for Community Service Affairs and Environmental Development
Prof. Kadry A. El-Bakry	Conference Secretary Vice Dean for Postgraduate Studies and Research
Prof. Mohamed A. Deyab	Chairman of the Organizing Committees
Prof. Ahmed M. Tarabia	Head of Mathematics Department
Prof. Ola A. Abo Samak	Head of Zoology Department
Prof. Ahmed K. Abdul- Samad	Head of Botany and Microbiology Department
Prof. Talaat A. Hegazy	Head of Environmental Sciences Department
Prof. Hatem Aboel Khair	Head of Geology Department
Prof. Seif-Eldin N. Ayyad	Head of Chemistry Department
Prof. Mortada Yousef	Head of Physics Department



Program Summary

Monday, 3/10/2022 **New Damietta**

09:30 - 10:30 Registration

10:30 – 12:00 Welcome and Opening Ceremony

Prof. Kadry A. El-Bakry

Vice Dean for Postgraduate Studies and Research
Conference Secretary

Prof. Omnya A. ElBatrawy

Vice Dean for Community Service Affairs and
Environmental Development
Conference Chairman

Prof. Mohamed I. Abu-Dobara

Dean of Faculty
Conference President

Prof. Hemdan R. Attia

Vice President for Postgraduate Studies and
Research

Prof. Abdel-Hamid A. Khedr

Vice President for Community Service Affairs and
Environmental Development

Prof. ElSayed M. Dadour

President of Damietta University

12:00 –1:30 Plenary Session (1)

1:30 – 2:00 Coffee Break

02:00 – 04:00 Scientific Sessions (1 & 2) (Hall A & B)

04:00 – 05:00 Lunch

End of the Day



Tuesday, 4/10/2022 New Damietta

09:30 - 10:00	Registration
10:00 – 11:30	Plenary Session (2)
11:30 –12:30	Poster Session (1)
12:30 – 1:00	Coffee Break
1:00 –3:00	Scientific Sessions (3 & 4) (Hall A & B)
03:00 – 04:00	Lunch
05:00 – 06:00	Nile Trip at Ras ElBar
	<i>End of the Day</i>

Wednesday, 5/10/2022 New Damietta

10:00 – 11:00	Poster Session (2)
11:00 –12:00	Plenary Session (3)
12:00 –12:30	Closing Session and Recommendations
12:30 –1:00	Coffee Break
1:00 – 02:00	Closing Ceremony
2:00 – 03:00	Lunch
	<i>End of the Conference</i>



Detailed Program

Monday, 3/10/2022

Plenary Session (1) – 12:00 – 1:30

1 Prof. Hesham El Asmar

Professor of Quaternary Geology and Coastal Sedimentology, Geology Department, Damietta University

"Are the Climatic Changes Represent an Astronomical Phenomenon or Related to Global Warming?"

2 Prof. Ibrahim Hassan

Faculty of Science, Alexandria University, president of scientific committee on Environmental problems at ASRT.

"Climate Change Risks in Egypt"

3 Prof. Waleed Tawfik

Head of Laser Application Department, National Institute of Laser, Cairo University

"Recent Applications of Laser Spectroscopy and LIDAR to Minimize Climate Changes and Environmental Pollution"

Scientific Session (1) 02:00 – 04:00 (Hall A)

"Climate Changes and Ecosystems"

1 Mamdouh S. Serag, Botany and Microbiology Department, Faculty of Science, Damietta University, Damietta, Egypt

Impact of climatic change on the plant diversity of three protected areas in Egypt



- 2 Hoda M. El-Gharabawy, *Botany and Microbiology Department, Faculty of Science, Damietta University, Damietta, Egypt*

Climate Change Impacts on Egyptian Wild Mushrooms

- 3 Doaa A. El-Emam, *Environmental Sciences Department, Faculty of Science, Damietta University, Egypt*

Climate change in the coastal areas: consequences, adaptations, and projections for the Northern Coastal Area, Egypt

- 4 Marwa T. Mohesien, *Botany and Microbiology Department, Faculty of Science, Damietta University, Damietta, Egypt*

Impact of climatic change on human health infectious and pandemic disease

- 5 Mohamed Abdelgalil, *Environmental Sciences Department, Faculty of Science, Damietta University, Egypt*

Renewable Wind Energy as a Source for Electricity Production along the Northern Coast, Egypt

Scientific Session (2) 02:00 – 04:00 (Hall B)

"Basic Sciences and Sustainable Development"

- 1 Abou-Dobara, M. I., *Botany and Microbiology Department, Faculty of Science, Damietta University, Damietta, Egypt*

Rapid detection of indicator bacteria in drinking water using multiplex PCR technique

- 2 Ahmed M. K. Tarabia, R., *Mathematics Department, Damietta Faculty of Science, Damietta University, Egypt*

Transient Solution of Two –Class priority Queuing System with Balking and Catastrophes.



- 3 EL-Sayed M. El-Morsy, *Botany and Microbiology Department, Faculty of Science, Damietta University, Damietta, Egypt*

Biosorption of heavy metals by dead biomass of *Mucor himalis*, and *Trichoderma viride* in separate and consortium system.

- 4 Mohamed Attia A. Raia, *South Valley Egyptian Petroleum Holding Company*

Oil Potentialities Of West Esh-El Mallaha (Weem) Area, Southern Gulf Of Suez, Egypt As Deduced From Well Log Data Interpretation.

- 5 Mahmoud M. Abd El-Latif *Genetic Engineering and Biotechnology Research Institute, University of Sadat City.*

Monitoring and Characterization of ground water in Sadat City, Menoufia, Egypt.

- 6 Rasha M. Abou Samra, *Environmental Sciences Department, Faculty of Science, Damietta University.*

Mapping the relationship between Toshka Lakes change and land surface temperature in Toshka Area, Western Desert, Egypt

Tuesday, 4/10/2022

Plenary Session (2) 10:00 – 11:30

- 1 **Prof. Mohamed Labib Salem**

Professor of Immunology, Zoology Department, Faculty of Science, Tanta University

"Does Climate Changes Change Immunity?"

- 2 **Prof. Atef Kamel**

Faculty of Veterinary medicine, Ain Shams University

"Climate Change Impact on Biodiversity and Ecosystem in the Contest of Sustainable Development"



3 Prof. Fathy A. Abdel-Ghaffar

*Professor of Parasitology, Zoology Department, Faculty of Science,
Cairo University*

**"From Lab to the Market Neem and Chenchona Tree Story and
Parasite Control"**

Poster Session (1) 11:30 – 12:30

- 1 Amira Sabry, *Protein Research Department, Genetic Engineering and Biotechnology Research Institute, City of Scientific Research and Technological Applications, New Borg El-Arab City, Alexandria*

Proteomic based investigation of rhamnolipid producing *Pseudomonas aeruginosa* strain PAO1

- 2 Eman M. Sarhan, *Scientific Research and Technological Applications City, Borg Al-Arab, Egypt*

***In silico* blind docking and molecular dynamics simulation of berberine-loaded albumin nano-formulation**

- 3 Marwa Moustafa Eltarahony, *Environmental Biotechnology Department, Genetic Engineering and Biotechnology Research Institute, City of Scientific Research and Technological Applications*

Lake Mariout as a source of bionanofactories *Streptomyces sp.*: Isolation, identification, silver nanoparticles biosynthesis and biological potentiality

- 4 Hadeel Said Ebrahim Elshall, *Scientific Research and Technological Applications City, Borg Al-Arab, Egypt*

Scaling Up Single Cell Oil Production From Two Different Oleaginous Fungi Using Molasses As a Substrate For Growth

- 5 Fawzia Z. El-Ablack, *Chemistry Department, Damietta Faculty of Science, Damietta University, Egypt*

Design, Synthesis, Anticancer Evaluation, DNA binding and molecular docking of a novel nanoThiazolo [5,4-b]Pyridine derivatives



- 6 Maisa Salah El-Din, *General Manger of Research & Development Department, Alexandria Water Company, Holding Company of Water & Wastewater, Alexandria, Egypt*

Environmentally- Friendly Method for the Control of Corrosion and Deposition of Scales by Herbal Extract in Water Systems

Scientific Session (3) 01:00 – 03:00 (Hall A)

"Environmental Monitoring Systems"

- 1 Khaled H. El-Ezaby, *Environmental Sciences Department, Faculty of Science, Damietta University.*

Characterization and biodegradability of food processing effluents in New Damietta city – Egypt.

- 2 Mervat A. El-Sonbati *Environmental Sciences Department, Faculty of Science, Damietta University.*

Comparative Study for Biological Treatment of Raw and Chemically Pretreated Dairy Industry Wastewater Employing Aerobic Effective Microorganisms.

- 3 Omnya A. El-Battrawy, *Department of Environmental Sciences, Faculty of Science, Damietta University.*

Assessment of Surface Water Quality of River Nile at Damietta Branch, Egypt.

- 4 Youmna A. Shaaban, *Environmental Sciences Department, Faculty of Science, Damietta University.*

Comparative study between aluminum and stainless-steel electrodes for treatment of oily wastewaters from some restaurants in New Damietta city-Egypt.

- 5 Samia S. B. El- Naeli, *Al-Zawia University, Al-Zawia, Libya*

Insulin Level in Rats with Zinc Deficiency Diet Treated with Artemisia absinthium and Cyproheptadine.



6 Abdalla Yakoub, *Sebha University, sebha, Libya*

Protective effects of silver nanoparticles of *Moringa Olifera* leaves against acrylamide induced toxicity in rats

Scientific Session 4 01:00 – 03:00 (Hall B)

"Nanotechnology Applications"

1 Heba Talat Ebeed, *Botany and Microbiology Department, Faculty of Science, Damietta University, Damietta, Egypt*

Silicon-mediated improvement of drought tolerance in two genotypes of wheat

2 Mohamed Marzouq El-Zahed, *Department of Botany and Microbiology, Faculty of Science, Damietta University, Egypt*

Extracellular biosynthesis and antimicrobial activity for zinc oxide nanoparticles by *Bacillus* sp. isolate

3 Asmaa M. Ghazi, *Environmental Sciences Department, Faculty of Science, Damietta University, Egypt*

Application of nanotechnology in wastewater treatment

4 Yasmeen A. Alramam, *Environmental Sciences Department, Faculty of Science, Damietta University, Egypt.*

Characterizing and Categorizing some organic solid waste biodegradability

5 Gehad M El-Ezaby, *Botany Department, Faculty of Science, Port Said University, Egypt*

Variations in morphological traits, net photosynthesis and expression of some genes, and their relation to drought resistance of seven rice genotypes



Wednesday, 5/10/2022

Poster Session (2) 10:00 – 11:00

- 1 Amany F. Hasballah, *Department of Environmental Sciences, Faculty of Science, Damietta University, Egypt*

Disinfection By-products of Ozone and Chlorine in Water Treatment Process

- 2 Talaat A. Hegazy *Environmental Sciences Department, Faculty of Science, Damietta University, Egypt*

Biotreatment of high organic load dairy wastewater by sequencing batch reactor

- 3 Magdy Khalil *Geology Department, Damietta Faculty of Science, Damietta University, Egypt*

Distribution of heavy metals in the bottom sediments, their transfer to the Nile water and effect on public health

٤ صالح محمد بيكي، كلية الزراعة – جامعة بني وليد، ليبيا & محمد عبدالله ابودويح، وزارة المالية الليبية

"الموارد المائية بليبيا تحديات الحاضر وتدابير مواجهة تدهورها"

٥ اسماء سعيد الاسرج & محمد فتحى عزازى، قسم مسوح الموارد الطبيعية معهد الدراسات والبحوث السياحية والموارد الطبيعية جامعة مدينة السادات

"تطبيق أبعاد التسويق التفاعلى للنهوض بالسياحة العلاجية بمنطقة وادي النطرون"

٦ عبد الله البكرى، إيمان النشار

"اللافندر السعودى استخدامات الماضى و ابحاث الحاضر و المجالات المستقبلية"



Plenary Session (3) 11:00 – 12:00

1 Prof. Yasser Hassan

Ex Head of air pollution department, National Research Center

"Air Quality and its Effect on Air Quality and Climatic Change "

2 Dr. Ahmed Yahia

Manger of the Environmental Affairs, HCWW.

"The Sewage Oxidation Ponds as Natural Habitats for Migratory Birds. the National Effort of in Biodiversity Preservation – Egypt"





General Lectures

- 1 **Prof. Hesham El Asmar** *Professor of Quaternary Geology and Coastal Sedimentology, Damietta University.*

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- 2 **Prof. Ibrahim Hassan** *Faculty of Science, Alexandria University, president of scientific committee on Environmental problems at ASRT.*

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"Recent Applications of Laser Spectroscopy and LIDAR to Minimize Climate Changes and Environmental Pollution"

- 4 **Prof. Mohamed Labib Salem** *Professor of Immunology, Zoology Department, Faculty of Science, Tanta University*

Does Climate Changes Change Immunity?

- 5 **Prof. Atef Kamel**, *Vice Dean for Community Service and Environmental Development, Faculty of Veterinary medicine, Ain Shams University*

Climate Change Impact on Biodiversity and Ecosystem in the Contest of Sustainable Development

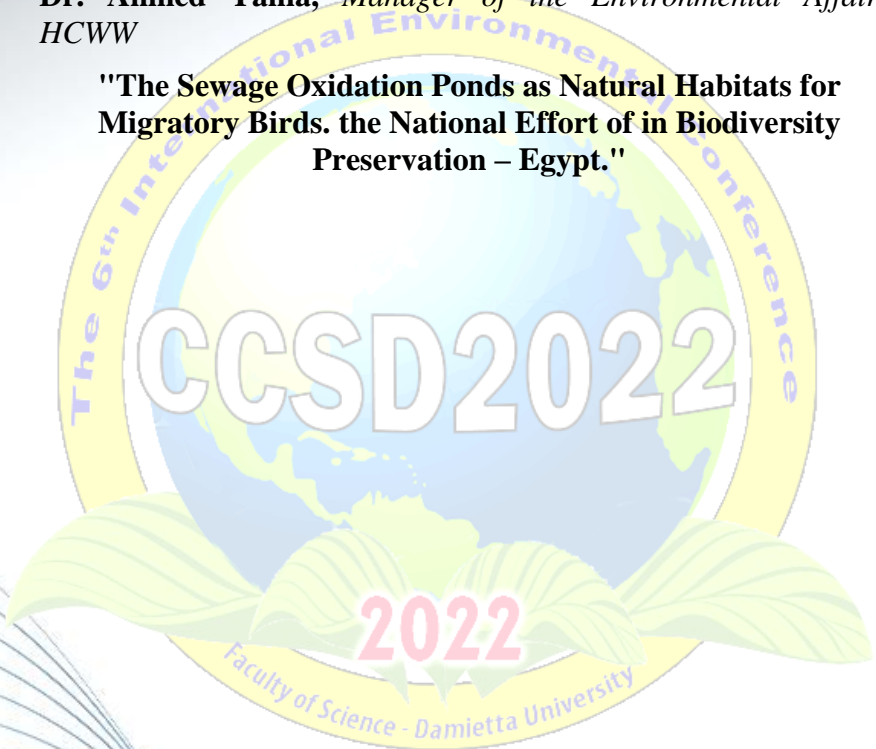
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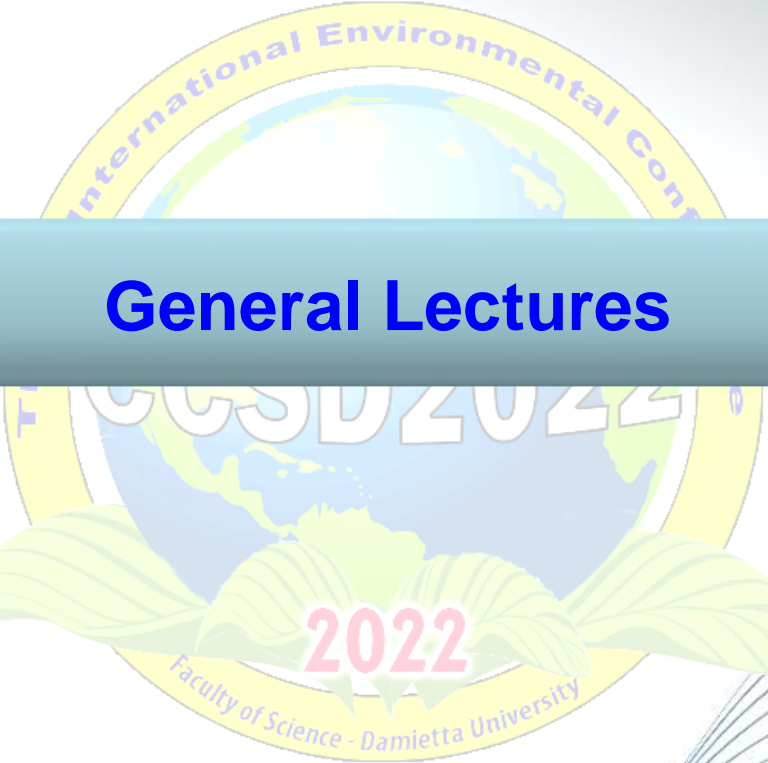
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General Lectures



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Are the Climatic Changes Represent an Astronomical Phenomenon or Related to Global Warming?

Hesham M. Elasmr

Professor of Quaternary Geology and Coastal Sedimentology, Damietta University

More than 35 years of debate on the concept of the greenhouse effect and ozone depletion. Hundreds of publications appeared during that time period, warning of rising sea levels, the activation of powerful tsunamis, and the inundation of vast areas of low land. However, no single study has proven that these phenomena are due to global warming. Despite this, can we be certain that the climate models are accurate? Are things hidden beyond closed doors? Which we do not take into account in our scientific agenda. If so, should we be concerned now, even if they are still present or potential? Finally, can we draw future lessons from the geological past?

During 1988, the CO₂ cycle exchanged 740Gtc, with an additional 3Gtc resulting from deforestation and the use of fossil fuels. This figure increased to 4.3 Gtc between 2000 and 2011. CO₂ levels have steadily increased from 288 to 417 ppm between 1860 and 2021. However, the post-industrial revolution shows cycles of warm and cold intervals, similar to the situation on the geologic time scale. This is supporting the idea that CO₂ increase is not always associated with global warming.

On the other hand, global climatic periods revealed several glacial and interglacial periods that were primarily related to the earth's astronomical positioning toward the sun (Milinkovic cycles). Furthermore, several interstadials occurred as a result of local conditions, such as the last glacial (60 000 to 16800) Heinrich events with a recurrence of 1000-1500 years, and Holocene Bonds events with a recurrence of 1000-1500 years. Evidence for recurring cycles of global climate change over the last centuries and millennia clearly shows many natural climatic warming and cooling events that occurred long before CO₂ emissions raised atmospheric CO₂ levels.

Keywords climate changes, Greenhouse gasses, global warming, cycles



Climate Change disaster risks in Egypt

Ibrahim A. Hassan

Faculty of Science, Alexandria University

President of the National Scientific Committee for Environmental Problems, Academy of Scientific Research & Technology

The accumulation of greater knowledge on the complexity of climate change brought about the preparation of a large number of reports describing the phenomenon and suitable solutions for it. As a result, all parties recognized that the time scale required to tackle the problem may be short or long and that, consequently, the entire issue could necessitate an urgent, short-term, medium-term, or long-term solution. The parties also acknowledged that this problem required a strategic perspective. Some countries were able to prepare their strategies, whereas the majority merely prepared their national communication reports describing their capacities and capabilities in terms of mitigation of and adaptation to climate change.

Egypt is considered highly vulnerable to climate change due to its primary dependence on the Nile River, which serves needs for potable water, agriculture, industry, fish farming, power generation, inland river navigation, mining, oil and gas exploration, cooling of machinery and power generation. This dependence on the Nile River's water makes the country vulnerable to rising temperatures, reduced rainfall for the upper Nile Basins as well as the reduction of rainfall on the east Mediterranean coastal zone.

The main objective of Egypt's National Strategy for Adaptation to Climate Change and Disaster Risk Reduction is to increase the flexibility of the Egyptian community when dealing with the risks and disasters that might be caused by climate change and its impact on different sectors and activities. It also aims at strengthening the capacity to absorb and reduce the risks and disasters to be caused by such changes.

Egypt submitted its Nationally-Determined Contribution (NDC) and Third National Communication (NC3) to the UNFCCC in 2016, in support of its efforts to realize its development and economic goals and increase its adaptive capacity to climate change. The country is particularly vulnerable to the impacts of climate variability and change, particularly with respect to water security, agriculture and livestock, increasingly adverse conditions to health, human settlements, and energy demand and supply. Egypt's NDC is consistent with the country's overall goals of reducing vulnerability and poverty, and achieving long-term sustainable, economic development. Key areas of focus include the sustainability of the environment, water resources, energy, sustainable land management, agriculture, and health. Moreover, Global Climate Change (GCC) affects biological and chemical fingerprints.



Recent Applications of Laser Spectroscopy and Lidar to Minimize Climate Changes and Environmental Pollution

Walid Tawfik

National Institute of Laser Enhanced Sciences (NILES), Cairo University, Cairo, Egypt.

The light detection and ranging (Lidar) system is an active form of remote sensing that employs a pulsed laser as a light source for detection and offers several benefits for observing air aerosols and other particles with high resolution in time and space. A lidar system was installed at the National Institute of laser, Cairo university, as an advanced remote sensing method that uses light in the form of a pulsed laser to measure ranges of air pollutants and aerosols. Currently, a team at NILES is involved in the renovation and development of such a lidar system by providing it with an up-to-date laser source and detection system. The running renovation project aims to utilize a diode-pumped Nd: YAG laser with 355 nm, 532, and 1064 nm wavelengths for operational observations at NILES. On the other hand, a new optical telescopic system is designed to extend the working distance range of the developed LIDAR up to 5 km.

On the other hand, the laser-induced plasma spectroscopy (LIPS) technique represents one of the most advanced spectroscopical methods in many biomedicine and environmental applications. LIPS is a rapid laser pulse that produces microplasma on the sample surface for chemical analysis. It has been applied to investigate two different types of bacteria, *Escherichia coli* (B1) and *Micrococcus luteus* (B2) deposited on glass slides using laser-induced plasma. Ca, Mg, Na, K, P, S, Cl, Fe, Al, Mn, Cu, C, H and CN-band appeared in bacterial samples in the air. The results showed that LIPS technique could identify and discriminate against different types of bacteria. Analyses of lead, Nickel, and Copper in the collected agricultural soil samples were achieved using laser-ablation inductively coupled plasma mass spectrometry (LA-ICP-MS) and inductively-coupled-plasma optical-emission spectroscopy (ICP-OES). By examining reference materials and comparing observed results to published concentration levels, the accuracy of the analyses was verified. The observed heavy element concentrations were higher than the Canadian soil quality requirements, indicating that the investigated agricultural soils were contaminated with these elements.

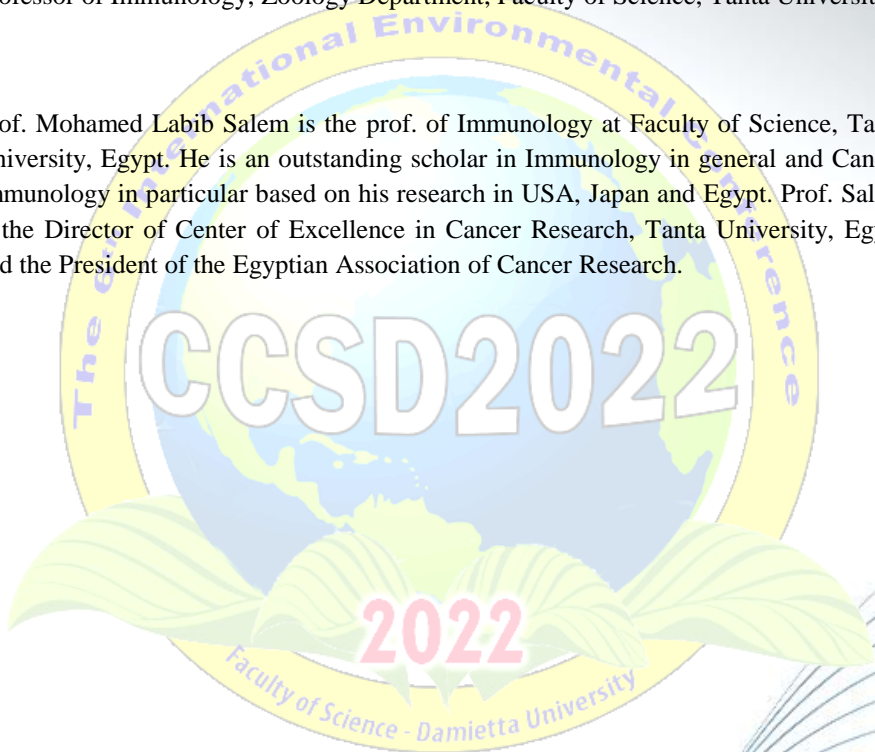


Does Climate Changes Change Immunity?

Mohamed Labib Salem

Professor of Immunology, Zoology Department, Faculty of Science, Tanta University

Prof. Mohamed Labib Salem is the prof. of Immunology at Faculty of Science, Tanta University, Egypt. He is an outstanding scholar in Immunology in general and Cancer Immunology in particular based on his research in USA, Japan and Egypt. Prof. Salem is the Director of Center of Excellence in Cancer Research, Tanta University, Egypt and the President of the Egyptian Association of Cancer Research.





Climate Change Impact on Biodiversity and Ecosystem in the Contest of Sustainable Development

Prof. Dr. Atef Mohamed Kamel

Founder of the Faculty of Veterinary Medicine, Ain Shams University, Vice Dean for Community Service and Environmental Development, supervisor of the establishment of the Department of Wildlife and Zoos, Professor - Member of the Scientific Committee of the CITES Convention - Expert on Wildlife and Natural Reserves, UNESCO, UNDP, Environment and Climate Change Expert at the Ministry of Environment

Abstract:

Biodiversity and biodiversity-based ecosystems services are intrinsically dependent on the climate. During the twentieth century, climate change has posed major threats to biodiversity in the world, and impacts are expected to increase as climate change continues and perhaps even accelerates.

As biodiversity underlies all goods and services provided by ecosystems that are crucial for human survival and well-being, this presentation discusses observed and anticipated impacts of climate change on global biodiversity and biodiversity-based ecosystem service provision and livelihoods. Loss of global biodiversity as a result of climate change can alter the structures and functions of world ecological systems. In Egypt, The Egyptian Climate Change Strategy 2050 will be employed to decrease current and future risks on the well-being through application of Sustainable Development Goals 2030

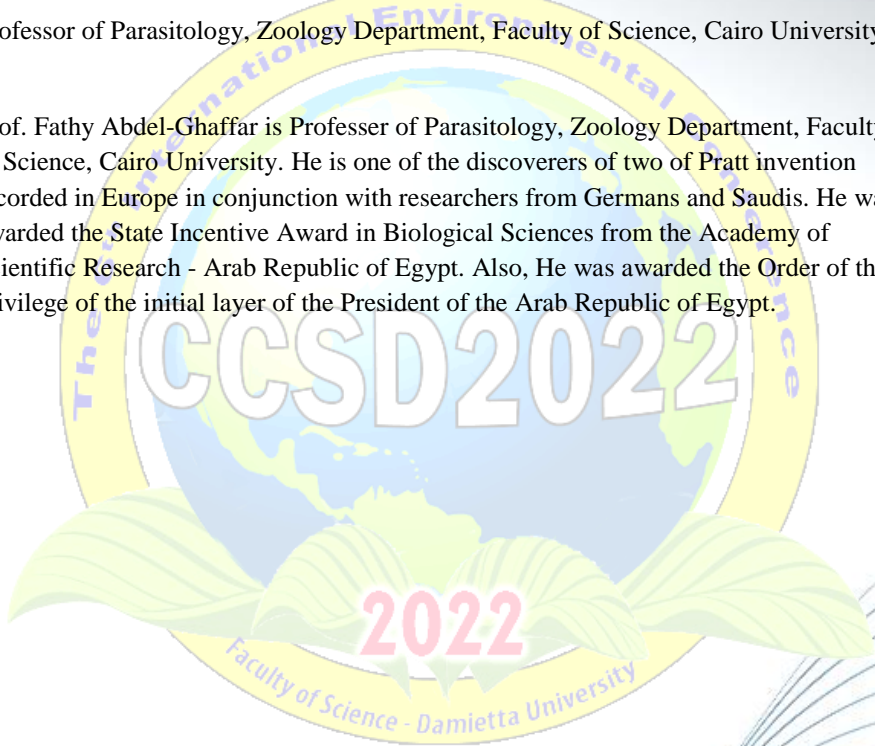


From Lab to the Market Neem and Chenchona Tree Story and Parasite Control

. Fathy A. Abdel-Ghaffar

Professor of Parasitology, Zoology Department, Faculty of Science, Cairo University

Prof. Fathy Abdel-Ghaffar is Professor of Parasitology, Zoology Department, Faculty of Science, Cairo University. He is one of the discoverers of two of Pratt invention recorded in Europe in conjunction with researchers from Germans and Saudis. He was awarded the State Incentive Award in Biological Sciences from the Academy of Scientific Research - Arab Republic of Egypt. Also, He was awarded the Order of the privilege of the initial layer of the President of the Arab Republic of Egypt.





Air Quality and its Effect on Air Quality and Climatic Change

Yasser Hassan

Ex Head of air pollution department, National Research Center

Abstract

- Clean air is an essential element for the survival of life on the earth.
- Climate change is currently the most serious environmental problem.
- Climate change and air quality are closely related.
- Changes in weather that accompany climate change may affect atmospheric concentrations of air pollutants.
- Ozone and secondary particulate matter are formed in the atmosphere and are influenced by prevailing meteorological conditions.
- Ultimately, improving our understanding of interactions between climate change and air quality will require the ability to couple regional-scale air quality/climate models with global climate and chemistry under a range of emissions and climate scenarios.
- Egypt believes that the discussion on climate change issues must remain within the framework of meetings and negotiations and the climate change



The Sewage Oxidation Ponds as Natural Habitats for Migratory Birds. The National Effort of in Biodiversity Preservation - Egypt

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²Migratory Soaring Birds Project/ UNDP

Abstract

The Wastewater Stabilization Ponds (WWSPs) have a great value for the Migratory Birds (MBs) where it acts as natural habitat along the migration corridors, especially those that are located in arid areas. Holding Company for Water and Wastewater (HCWW) has numerous WWSPs (natural stabilization ponds "> 25 sites") located along the flyway of MBs; this section of flyway in Egypt is considered a severe arid region. Thereby, these WWSPs and their "woody forest" have a significant role as an ecological model (i.e., a temporary rest site for drinking, feeding, and bathing) for MBs.

Despite the importance of these WWSPs, the water at some sites is of poor quality and potentially toxic to MBs; Therefore, this offensive water quality would be a reason for hundreds of mortalities of MBs that has been reported in Sharm-Elsheikh WWSP in recent years.

The site of Sharm-Elsheikh WWSP and its woody forest represents specific importance, which could attribute to (i) it is considered the first rest site in severe arid region for the MBs during the spring trip to the wintering areas, (ii) in the same time, it is a come after a very long trip over a severe arid region during the autumn trip to the breeding areas, (iii) the touristic character of the city which attracts many of bird watcher to the site.

In another track, HCWW has expanded its scope in terms of environmental protection to include the conservation of biodiversity, particularly in the current circumstances of climate change impacts. HCWW has been involved in a partnership with the Egyptian Environmental Agency (EEAA) in activities aim to conserve the migratory soaring birds in the framework of an international project funded by UNDP and bird life international.

Beyond this partnership, both HCWW and EEAA target (i) maintaining Egypt's reputation in terms of biodiversity conservation, (ii) fulfilling Egypt's obligations to the UN convention of Biological Diversity, and (iii) reinforcing



the Egyptian efforts toward achieving goal no 15 of SDGs (the life on the land).these intended targets could be achieved throughout (i) improving the performance of WWSPs located along the flyway, (ii) reuse of WWSPs (out of service) that are substituted by the mechanical ones to create an ecological model for MBs, and (iii) preparing the landscape of WWSPs which located in the touristic areas to attract the bird watcher and dedicate to the concept of ecological tourism.

The site of Sharm-Elsheikh WWSP and its woody forest has been chosen based on the reasons that have been mentioned above and to achieve a “quick win” to make the site a success story that would inspire other sites to rehabilitate to become a friendly site for birds.

Addressing challenges

- deterioration of the water quality at the site of Sharm-El Sheikh WWSP.
- Hundreds of mortalities have been reported, Particularly for White stork species at the site of Sharm-El Sheikh WWSP.

The taken steps in this regard

- Embark on a long-term collaboration between HCWW and EEAA in terms of Conserving MBs throughout drafting a protocol of Cooperation in this regard and it is expected to be signed on the sideline of the proposed event in Green Zone.
- HCWW has executed a multi-discipline plan in order to rehabilitate the Sharm-El Sheikh WWSP targeting (i) improving the performance of the treatment process (operation and maintenance), (ii) prepare the landscape of the site, and (iii) developing the capacity of laborers to deal with the flocks of MBs.

Key outcomes

- the dedication to the principle of MBs conservation in the HCWW policy.
- looking forward to a wider partnership and cooperation to establish a bird observatory at the site of Sharm-El Sheikh WWSP, that would serve the R&D efforts in the field of Conservation of MBs and to be a reporting station with other stations in neighboring countries.
- Transformation of sewage ponds at Sharm El-Sheikh to be an ideal eco-tourism site for bird watching in Egypt;
- Mainstreaming the achievements of all the WISPs located along the flyway in Egypt to be friendly with MBs.



Themes of the Conference





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- 2 Hoda M. El-Gharabawy, *Botany and Microbiology Department, Faculty of Science, Damietta University, Damietta, Egypt*
Climate Change impacts on Egyptian wild mushrooms
- 3 Doaa A. El-Emam, *Environmental Sciences Department, Faculty of Science, Damietta University, Egypt*
Climate change in the coastal areas: consequences, adaptations, and projections for the Northern Coastal Area, Egypt
- 4 Marwa T. Mohesien, *Botany and Microbiology Department, Faculty of Science, Damietta University, Damietta, Egypt*
Impact of climatic change on human health infectious and pandemic disease
- 5 Mohamed Abdelgalil, *Environmental Sciences Department, Faculty of Science, Damietta University, Egypt*
Renewable Wind Energy as a Source for Electricity Production along the Northern Coast, Egypt

Theme 2: Basic Sciences and Sustainable Development

- 1 Abou-Dobara, M. I., *Botany and Microbiology Department, Faculty of Science, Damietta University, Damietta, Egypt*
Rapid detection of indicator bacteria in drinking water using multiplex PCR technique



- 2 Ahmed M. K. Tarabia, R., *Mathematics Department, Damietta Faculty of Science, Damietta University, Egypt*

Transient Solution of Two –Class priority Queuing System with Balking and Catastrophes

- 3 EL-Sayed M. El-Morsy, *Botany and Microbiology Department, Faculty of Science, Damietta University, Damietta, Egypt*

Biosorption of heavy metals by dead biomass of *Mucor himalis*, and *Trichoderma viride* in separate and consortium system

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Oil Potentialities Of West Esh-El Mallaha (Weem) Area, Southern Gulf Of Suez, Egypt As Deduced From Well Log Data Interpretation

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Monitoring and Characterization of ground water in Sadat City, Menoufia, Egypt.

- 6 Rasha M. Abou Samra, Environmental Sciences Department, Faculty of Science, Damietta University.

Mapping the relationship between Toshka Lakes change and land surface temperature in Toshka Area, Western Desert, Egypt

Theme 3: Environmental Monitoring Systems

- 1 Khaled H. El-Ezaby, *Environmental Sciences Department, Faculty of Science, Damietta University.*

Characterization and biodegradability of food processing effluents in New Damietta city – Egypt.



- 2 Mervat A. El-Sonbati *Environmental Sciences Department, Faculty of Science, Damietta University.*
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- 3 Omnya A. El-Battrawy, *Department of Environmental Sciences, Faculty of Science, Damietta University.*
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- 4 Youmna A. Shaaban, *Environmental Sciences Department, Faculty of Science, Damietta University.*
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- 5 Samia S. B. El- Naeli, *Al-Zawia University, Al-Zawia, Libya*
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- 6 Abdalla Yakoub, *Sebha University, sebha , Libya*
Protective effects of silver nanoparticles of *Moringa Oliefera* leaves against acrylamide induced toxicity in rats
- 7 Magdy Khalil *Geology Department, Damietta Faculty of Science, Damietta University, Egypt*
Distribution of heavy metals in the bottom sediments, their transfer to the Nile water and effect on public health
- 8 Amany F. Hasballah, *Department of Environmental Sciences, Faculty of Science, Damietta University, Egypt*
Disinfection By-products of Ozone and Chlorine in Water Treatment Process



- 9 Talaat A. Hegazy *Environmental Sciences Department, Faculty of Science, Damietta University, Egypt*

Biotreatment of high organic load dairy wastewater by sequencing batch reactor.

Theme 4: Nanotechnology Applications

- 1 Heba Talat Ebeed, *Botany and Microbiology Department, Faculty of Science, Damietta University, Damietta, Egypt*

Silicon-mediated improvement of drought tolerance in two genotypes of wheat

- 2 Mohamed Marzouq El-Zahed, *Department of Botany and Microbiology, Faculty of Science, Damietta University, Egypt*

Extracellular biosynthesis and antimicrobial activity for zinc oxide nanoparticles by *Bacillus* sp. isolate

- 3 Asmaa M. Ghazi, *Environmental Sciences Department, Faculty of Science, Damietta University, Egypt*

Application of nanotechnology in wastewater treatment

- 4 Yasmeen A. Alramam, *Environmental Sciences Department, Faculty of Science, Damietta University, Egypt.*

Characterizing and Categorizing some organic solid waste biodegradability

- 5 Gehad M El-Ezaby, *Botany Department, Faculty of Science, Port Said University, Egypt*

Variations in morphological traits, net photosynthesis and expression of some genes, and their relation to drought resistance of seven rice genotypes

- 6 Amira Sabry, *Protein Research Department, Genetic Engineering and Biotechnology Research Institute, City of Scientific Research and*



Technological Applications, New Borg El-Arab City, Alexandria

Proteomic based investigation of rhamnolipid producing *Pseudomonas aeruginosa* strain PAO1

- 7 Eman M. Sarhan, *Scientific Research and Technological Applications City, Borg Al-Arab, Egypt*

In silico blind docking and molecular dynamics simulation of berberine-loaded albumin nano-formulation

- 8 Marwa Moustafa Eltarahony, *Environmental Biotechnology Department, Genetic Engineering and Biotechnology Research Institute, City of Scientific Research and Technological Applications*

Lake Mariout as a source of bionanofactories *Streptomyces sp.*: Isolation, identification, silver nanoparticles biosynthesis and biological potentiality

- 9 Hadeel Said Ebrahim Elshall, *Scientific Research and Technological Applications City, Borg Al-Arab, Egypt*

Scaling Up Single Cell Oil Production From Two Different Oleaginous Fungi Using Molasses As a Substrate For Growth

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- 1 Fawzia Z. El-Ablack, *Chemistry Department, Damietta Faculty of Science, Damietta University, Egypt*

Design, Synthesis, Anticancer Evaluation, DNA binding and molecular docking of a novel nanoThiazolo [5,4-b]Pyridine derivatives

- 2 Maisa Salah El-Din, *General Manger of Research & Development Department, Alexandria Water Company, Holding Company of Water & Wastewater, Alexandria, Egypt*

Environmentally- Friendly Method for the Control of Corrosion and Deposition of Scales by Herbal Extract in Water Systems



Theme 6: Natural Resources and Ecosystems Preservation

- ١ صالح محمد بيكي، كلية الزراعة – جامعة بني وليد- ليبيا
محمد عبدالله ابودويح، وزارة المالية الليبية
الموارد المائية بليبيا تحديات الحاضر وتدابير مواجهة تدهورها
- ٢ على عبد الله البكري، ايمان النشار
اللافندر السعودى استخدامات الماضى و ابحاث الحاضر و المجالات المستقبلية
- ٣ اسماء سعيد الاسرج & محمد فتحى عزازى، قسم مسوح الموارد الطبيعية معهد
الدراسات والبحوث السياحية والموارد الطبيعية جامعة مدينة السادات
"تطبيق أبعاد التسويق التفاعلى للنهوض بالسياحة العلاجية بمنطقة وادي النطرون"





Abstracts



Enviro Service
Environmental Consultation
And General Services





Theme 1: Climate Changes and Ecosystems

Impact of Climatic Change on the Plant Diversity of Three Protected Areas in Egypt

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Abstract:

This review will focus on the impact of climate change on the plant diversity of three protected areas in Egypt. These protected areas are namely; El Omyed, El Burullus and Ashtoum el Gamil.

Three facet of plant diversity: habitat diversity, species richness and genetic diversity within species. Wild plants in the protected areas are suffering from extreme climate. This will led to the endangered of highly economic species. Invasive species and rare species in these protected areas will be considered in the management action plans. Actions for conservation and mitigation of extreme climate will be discussed

Keywords: Climate change, plant diversity, conservation, El Omyued, El Burullus , Ashtoum El Gamil



Climate Change Impacts on Egyptian Wild Mushrooms

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Abstract

Climate change and global warming seems to be a major driver of the loss of biodiversity, and it is predicted to have an even greater impact in the decades to come. The increase of temperatures and the climate upheavals disturb the ecosystems; this has consequences for all living organisms. This study provides a broad overview of the current status of knowledge of how fungi are responding to climate change and how their ecological functions and interactions may affect ecosystem responses to current and future change.

Studies have shown that Egypt's climate has changed greatly over the last 10,000 years, changing gradually from a wet climate (rainfall was more than 300 mm/year) to a more arid climate (less than 50 mm/year). Egypt's Nile Delta is a globally important but critically endangered ecoregion, threatened by climate change, habitat destruction, pollution and increased salinity. Its ecosystems could not exist without fungi as symbionts and recyclers, and they face the same threats on the animals and plants, which depend on them.

In Egypt, wild mushrooms used to start growth with the beginning of autumn and continued growth during winter around September to March. Few species could grow only in winter at lower temperatures as *Agaricus cupreobrunneus*, *A. vaporarius*, and *Conocybe subovalis* since 1999. Recently all that has changed, some mushroom species unusually grown during early summer as *Ganoderma mbrekobenum* and during the whole year as *Crystallicutis damiettenses*. *Volvariella speciosa* (*Volvopluteus*) were observed growing commonly since 1992 and recently were rarely seen. In addition, *Morchella galilaea* starts to grow back with the temperature decrease down to 6°C and disappeared again gradually in following years with the warm climate and high temperatures. Climate change is dramatically altering the growing patterns of mushrooms, toadstools and other fungi, however it may have positive ecological effects.



Climate Change in the Coastal Areas: Consequences, Adaptations, and Projections for the Northern Coastal Area, Egypt

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Abstract

Coastal and estuarine ecosystems provide a wide range of products and services, including food production, water quality management, storm protection, and carbon storage, to name a few. However, these regions are the most affected by climate change. In this study, we investigate climate change consequences and the potential regional adaptation methods to them, with an emphasis on coastal risks. We evaluated their efficacy in terms of long-term climate change and the coastal management methods for which they were created. Because the assessment is not reliant on the local environment only, it is applicable to most coastal locations. We undertook a literature analysis to identify measures that may be applied to the coastal area of Damietta. These two integrated methodologies classify these metrics based on the EMA's (Egyptian Meteorological Authority) and Egyptian Environmental Affairs Agency's (EEAA) for regional management practices, the Climate Change Performance Index (CCPI), and the IPCC's (Intergovernmental Panel on Climate Change) classification of adaptation measures based on physical-environmental, socio-economic, or institutional characteristics. In parallel, several criteria were created to assess the current and future efficiency of the measure, irrespective of the local situation. Finally, this strategy permitted objective and simple comparisons between measurements by offering an assessment of the adaption measures using these criteria and giving projections for what we will face in the future. The study suggested certain extension strategies to improve awareness about the expected implications of climate change.

Keywords: Climate change; Coastal area; Consequences; Adaptation; Awareness; Risk assessment



Impact of Climatic Change on Human Health Infectious and Pandemic Disease

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Abstract:

One of Egypt's main priorities for sustainable development is human health. This study will focus on the effect of climate on the spread of infectious and pandemic diseases.

The global economy is being profoundly impacted by responses to the pandemic. More than disease outbreaks, climate change is anticipated to have an impact on human health, the economy, and society. On the local and global levels, can steer society in a more healthful, eco-friendly and equitable direction.

By promoting the reduction global warming emissions, advancing societal equality, boosting local resilience, and achieving sustainable development goals. These investments can be made in technologies and strategies that reduce and prevent risks, such as those posed by climate change and pandemics.

Action plan to lessen how certain infectious and pandemic diseases are impacted by extreme climate. A focus will be done on pandemic illnesses like COVID-19 and other related varieties of viruses will be discussed.

Keywords: Climate change, COVID-19 virus, Human health, infectious diseases, pandemic diseases, Sustainable development goals



Renewable Wind Energy as a Source for Electricity Production along the Northern Coast, Egypt

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Abstract

The northern coast of Egypt enjoys the flatness of the region and the absence of obstacles to the arrival of winds, with the continuity of winds in various seasons. Through quantitative analysis of the rates of presence of influential wind speeds (capable of moving wind turbine panels and generating electrical energy) from different directions, it was found that the highest percentages of influential winds were present during the summer from June to August, and that the prevailing winds are the northern winds and their derivatives with the emergence of wind bundles from the south direction, its derivatives are relatively small.

The priority of suitable sites for placing wind turbines has been suggested, depending on the percentage of the annual blowing time of the influential winds from all directions and throughout the year, as 43.52%, 33.82%, 31.25%, 25.84%, 25.57% and 16.60% at Marsa Matruh, El Alamein, Sallum, Alexandria, Port Said and Al Arish respectively.

Keywords: Renewable energy, Northern Coast, Active Wind, Wind Regime.



Theme 2: Basic Sciences and Sustainable Development

Rapid Detection of Indicator Bacteria in Drinking Water using Multiplex PCR Technique

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Abstract

Microbial indicators, especially coliform group including *Escherichia coli* and Enterococci have been used for detecting fecal contamination in water. These microbial indicators, were used to estimate the probability number in drinking water contaminated by *E. coli*. Which are considered as key elements of most drinking water quality guidelines. Approved classical methods for indicator organism's discovery include the multiple-tube fermentation (MTF) and the membrane filter (MF) techniques and compared with the multiplex PCR technique. The multiplex PCR technique was optimized to use a collection of three set of different primers. The first set is for amplification of 876 bp from *lacZ* gene present in all coliform bacteria including *E. coli*, the second set is to amplify 147 bp of *uidA* gene specific for *E. coli*. While the last set produces 112 bp of *tuf* gene, which is specific for all Enterococci. Multiplex PCR technique was shown to be an efficient, sensitive and rapid method for the simultaneous detection of these three microbiological indicators in contaminated water. The optimized multiplex PCR was used to detect pollutant microorganisms and evaluate three water treatment stations (El-Rahmna – El-Adlyia – El-Bostan) in Damietta County, Egypt.

Key words: Indicator bacteria, multiplex PCR, LacZ, uidA, tuf.



Transient Solution of Two –Class priority Queuing System with Balking and Catastrophes

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Abstract

The present paper investigates the transient solution of two– class priority queuing system with balking and catastrophes. We discuss priority queuing system with two-class priority (high and low) with balking and catastrophes where balking is for high class priority and catastrophes for all the system. We consider a single server queuing system serving two types of customers say class-1 and class-2, each having its own respective line and the arrival process for both types is state independent. A higher priority is assigned to class-1 and a low priority to class-2. Suppose that the service rule within each class is FIFO and the priority system is preemptive resumed, i.e. during the service of a low priority customer, if high priority customers joins the system, then the low priority customer's service is interrupted and will be resumed again when there is no high priority customers in the system. On arrival a customer either decides to join the queue of the class-1 with probability one if the number of customers in the class-1 is less than a threshold value k . If there are k customers or more ahead of him, then he joins the queue with probability β and may balk with probability $(1 - \beta)$. The capacity of the system is infinite. When the system is idle or busy, catastrophes may occur at the service station according to Poisson process of rate γ . Whenever a catastrophe occurs at the busy. Moreover, we discuss some special cases.



Biosorption of heavy metals by dead biomass of *Mucor himalis*, and *Trichoderma viride* in separate and consortium system.

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Abstract.

Thirty taxa of fungi were isolated from polluted sediments in lake Manzala of them *Mucor himalis* and *Trichoderma viride* were selected for biosorption study. The Effects of Initial metal concentration, biomass concentration, pH and contact time on biosorption of iron, lead and cadmium were evaluated on deadly biomasses of selected species in separate and consortium culture. The adsorption rate increases when the initial metal ion concentration rises, as long as binding sites are not saturated. These isotherms follow the typical Langmuir adsorption pattern. The maximal uptake of Fe, Pb and Cd occurred at 100 ppm. For *Mu. himalis* the maximal uptake of Fe, Pb and Cd were 50.77 ± 0.78 , 45.20 ± 0.50 and 32.69 ± 0.55 mg/g respectively, whereas for *Tr. viride* the maximal uptake was 63.39 ± 1.74 , 57.38 ± 0.40 , and 37.03 ± 0.56 mg/g respectively. In consortium experiment the maximal uptake was raised to 70.41 ± 0.43 , 61.69 ± 0.46 , and 40.13 ± 0.59 mg/g respectively. The level of ion uptake rose with increasing biomass with maximum efficiency of biosorption at 200 mg. The highest uptake of Fe, Pb and Cd were 46.35 ± 0.61 , 40.25 ± 0.51 , and 48.62 ± 0.52 mg/g for *Mu. himalis* and 59.41 ± 0.56 , 57.54 ± 0.49 , and 37.47 ± 0.59 mg/g for *Tr. viride* respectively. In consortium exp. the highest uptake was 66.25 ± 1.23 , 62.32 ± 0.42 , and 40.46 ± 0.57 mg/g. The pH effect was variable. The highest uptake of Fe, Pb and Cd (26.15 ± 0.61 , 19.55 ± 0.50 &



15.38±0.46 mg/g) by *Mu. himalis* was at pH 4, while for *Tr. viride* the highest uptake of Fe (29.72±0.51 mg/g), Pb (26.52±0.67 mg/g) and Cd (20.58±0.71 mg/g) was occurred at pH 6. By the way the fungal consortium showed the highest uptake for Fe (36.68±0.73 mg/g), Pb (31.55±0.67 mg/g) and Cd (26.31±0.70 mg/g) at pH 6. For contact time, the highest uptake of Fe (37.08±0.57), Pb (22.34±0.35) and Cd (21.70±0.68 mg/g) was occurred at 15 min 37.08±0.57, 22.34±0.35 and 21.70±0.68 mg/g respectively at 15 min by *Mucor himalis* and 39.50±0.43, 29.41±0.66, and 25.74±0.66 mg/g respectively at 20 min for *Tr. viride*. Alike, in fungal consortium the highest uptake of Fe and Pb (43.33±1.15, 32.87±0.46) at 20 min and Cd (27.84±0.64 mg/g) at 30 min respectively. Generally, biosorption of metal ions proceed rapidly during the initial 15 min. of contact and then proceeded very slowly by time and stable after 30, 60 min.





Oil Potentialities of West Esh-El Mallaha (Weem) Area, Southern Gulf of Suez, Egypt as Deduced from Well Log Data Interpretation

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Abstract

West Esh El Mellaha area (WEEM) is located at the southern onshore part of Gulf Of Suez (GOS) and extended to about 52 km². The main objective of this article is to extract the most important petrophysical parameters of sedimentary sequence to evaluate and define the hydrocarbon potentiality in WEEM area using the available well log data suite. The lithology of each reservoir were detected by using combination of different logs and different cross-plots including "Neutron-Density Cross-Plot" and "M-N Cross plot" respectively . Four wells were selected for the study, Tawoos-1, R-4, RE-2 and RE-22 which represent most of the study area. The results of the interpretation indicated that pre rift reservoirs sediment "Nubia, Matulla" are composed of coarse to fine grained sandstone with fair to poor sorting. Shale inter-beds are common and some wells show carbonate layer in the upper Nubia-A. The post-rift reservoir sediment "Nukhul is considered one of the main reservoirs in our study area. Its main lithology is Sandstone, dolomite and, Limestone as well as the presence of shale. The majority of point distributed as carbonate (dolomite and limestone) with some of it back to the effect of clay minerals and calcareous cement. Different Cross Plots indicated the abundance of dolomite and limestone with minor occurrence of sand stone. The presence of high shale content in Rudies fm. shifted the point downward in M-N Cross plot. This reveals that the reservoir encountered is highly calcareous sandstone .WEEM area considered promising hydrocarbon potentiality, (especially Matulla consider oil producer zone from Tawoos-1 well, (Basement, Nubia,



Matulla, and Nukhul clastics) consider oil producer zones from RE-2 well, (Matulla, Nubia) consider oil producer zone from R-4 well, and (Rudies) consider oil producer zone from RE-22 well.

Keywords: Well Logging, Neutron-Density cross-plot, M-N plot., Hydrocarbon Potentiality . Nukhul Clastic, Matulla, Nubia Reservoir, West Esh El Mallaha, Southern Gulf Of Suez.





Monitoring and Characterization of ground water in Sadat City, Menoufia, Egypt

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Abstract

The aim of the study was to describe water sources of Sadat city, Menoufia, Egypt. Monitoring support wells, artesian plants, and surface source which play an important rule in water quality as well as networks was run for 6 years from 2012 to 2017. The results showed the surface water source had fixed total dissolved solids (TDS) over the study years with an average of 272 ml/L. For the northern wells, TDS ranged from 397 mg/L to 546 mg/L with an average of 482 mg/L over a study period. For the southern wells, the TDS ranged from 703 mg/L to 1142 mg/L and had gradually increased due to overuse and uncontrolled water withdrawal from wells pumped into the reservoir, which supplies water to residential areas. The water of Sadat city especially in case of southern wells has no considerable potentials of groundwater resource. In addition, the water quality of distributed ones showed the most areas were supplied with water through the northern and surface stations had acceptable quality according to Egyptian guideline except the first and second residential areas.

Keywords: Sadat city; water resources; total dissolved solids; Iron; Manganese.



Mapping the Relationship between Toshka Lakes Change and Land Surface Temperature in Toshka Area, Western Desert, Egypt

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Abstract

Land surface temperature (LST) is an influential environmental parameter that is affected by land use /cover changes. The main goal of this research was to detect the effects of human interventions related to the dryness of Toshka lakes on LST by GIS and remote sensing tools. Sentinel images were utilized to estimate LST during the period between 2001 and 2022. Automated Water Extraction Index (AWEI) was used to derive water bodies from the study area. The results indicated that the area of the lakes covered by water decreased from 1587.71 km² to 69.92 km² between 2001 and 2019 and the dried area were covered by bare land and salt crusts. Average LST was increased by 25 °C from 2001 to 2019. After 2019, intense floods in Sudan were plentiful sufficiently to increase the water level of Lake Nasser permitting the eastern basin of Toshka to initiate filling. In 2021, Sudanese floods resulted in the fast filling of the lakes and LST was decreased compared to 2019. Several hopeful strategies are needed for sustainable environmental management in the study area.

Keywords Land surface temperature (LST); Sentinel data; Automated Water Extraction Index (AWEI); GIS; Toshka Lakes.



Theme 3: Environmental Monitoring Systems

Characterization and Biodegradability of Food Processing Effluents in New Damietta city - Egypt

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Abstract

The present study was carried out to investigate the characteristics and biodegradability of some food processing effluents in New Damietta city-Egypt. This is in order to assess the compatibility of these effluent characteristics with the Egyptian Environmental Regulation (Decree 44/2000) for discharging to the sewer systems, and study the applicability of using the biological treatment for these wastewaters before the drainage to either the sewer system or the main drain of New Damietta city. Six grab wastewater samples were collected from the kitchens discharge points of the most popular restaurants in New Damietta city, in addition to another four wastewater samples were also collected from the main drains of some food processing factories located at the industrial zone in New Damietta city. Some physico-chemical characteristics of the ten wastewater samples were analyzed, and the 28 days biodegradability experiments were carried out. The BOD/COD ratio was also calculated for each investigated effluent. The results indicated that the vast majority of the measured physico- chemical characteristics are not complying with the regulatory limits for the discharge to the sewer system according to Egyptian Environmental Regulation (Decree 44/2000). The obtained COD values were ranged from 26200 to 833 mg/l, while the BOD results varied between 8860 and 590 mg/l, and the oil & grease concentrations ranged from 2.9 to 4431 mg/l. The biodegradability of wastewater from four study sites was recorded as easy biodegradable, while another five sites were medium biodegradable and only one study site was classified as moderate biodegradable.

Keywords: Food processing effluents, wastewater characteristics, biodegradability experiments, BOD/COD ratio.



Comparative Study for Biological Treatment of Raw and Chemically Pretreated Dairy Industry Wastewater Employing Aerobic Effective Microorganisms

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Abstract:

This work was conducted to evaluate the efficiency of biological treatment for both raw and alum-lime pretreated dairy industry wastewater employing pre acclimated Effective Microorganisms (EM) through aerobic treatment technology. The samples were collected during the year 2018 from a plant for manufacturing dairy products, characterized for some physico-chemical parameters (pH, Turbidity, Total suspended Solids (TSS), Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Oil and Grease, Total Nitrogen (TKN), Total Phosphorus (TP)) and subjected to biological treatment by EM. The results showed that COD removal of raw wastewater reached 99.7% at HRT 36 hrs., in contrast to the pretreated samples which achieved 94% removal after 42 hr. Raw dairy industry wastewater treatment accomplished an overall removal efficiency of 99.9%; 99.7%; 97%; 98.4%; 99.8% and 98% for turbidity, COD, TSS, oil & grease, total-p, and TKN, respectively. It was concluded that pre acclimated EM was more efficient for the treatment of raw dairy wastewater than chemically pretreated samples.

Keywords: Raw dairy wastewater, Pretreated Dairy Wastewater, Biological Treatment, Effective Microorganisms (EM) Technology.



Assessment of Surface Water Quality of River Nile at Damietta Branch, Egypt.

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Abstract

The Nile River's quality is the problem concerning everyone's health in Egypt. It is subject to many sources of pollution from municipalities, agriculture, and industry, but little information is available on the quality of the river's water. This study aimed is to analyse the water quality of the river Nile at the Damietta branch. Water samples were collected from the Damietta branch and the physical and chemical parameters were analyzed as (temperature, PH, Turbidity, EC, TDS, alkalinity, total hardness, Ca⁺⁺ and Mg⁺⁺ hardness, chlorides, sulfates, and Aluminium, ammonia, nitrite, and nitrate, iron, manganese, and silica. The results indicated that: Turbidity was 7.81 NTU, while temperature, pH, EC, and TDS were 23°C, 8.03, 403.75 µmohs/cm, and 266.25 mg/l, respectively. The concentrations of alkalinity, total hardness, Ca⁺⁺ and Mg⁺⁺ hardness were 142, 131.5, 82.5, and 49 mg/l, respectively. While chlorides, sulfates, and Aluminium concentrations were 27, 34.25, and 0.063 mg/l, respectively; ammonia, nitrite, and nitrate concentrations were 0.13, 0.083, and 0.59 mg/l, respectively; and iron, manganese, and silica concentrations were 0.058, 0.05, and 1.3 mg/l, respectively. All of the physicochemical parameters of the water samples were within the permissible limits of the Egyptian standards for drinking water. The present study observed that the overall water quality of the Nile River in the study area ranged from marginal to good according to the Egyptian standards of the Nile River protection agency.

Keywords: Nile River, Drinking water, physicochemical parameters.



Comparative Study between Aluminum and Stainless-Steel Electrodes for Treatment of Oily Wastewaters from some Restaurants in New Damietta City-Egypt

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Abstract

During the last few years, Electrocoagulation technique has recently attracted attention in treating various types of wastewaters, having the capability to remove a wide range of pollutants as chemical oxygen demand (COD), in addition to oil and grease. This study was carried out to characterize and compare between aluminum and stainless-steel electrodes in electrocoagulation treatment of restaurants wastewater at different electrolysis times, in New Damietta city - Egypt. The study revealed that the pollutants removal efficiency depends on the type and characteristics of the wastewater sample. The best COD removal efficiency in restaurant number one (93.39%) was achieved by using two electrodes of stainless-steel, while the best oil and grease removal efficiency (92.32%) was recorded when two electrodes of aluminum were used. On the other hand, in restaurant number two using one electrode of aluminum as anode and one electrode of stainless-steel as cathode, achieved the best COD and oil and grease removal efficiencies with about 98.53% and 100% respectively.

Keywords: Electrocoagulation, oily wastewaters, stainless-steel electrodes, oil & grease removal efficiency.



Insulin Level in Rats with Zinc Deficiency Diet Treated with *Artemisia Absinthium* and Cyproheptadine

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Abstract

Introduction: Species of the Subfamily, has been used for a long time in traditional medicine and diets to treat ailments including hepatitis and diabetes. In diabetic patients, it has anti-diabetic and anti-hyperlipidemic effects. In the current study, investigated the effects of *Artemisia absinthium* against zinc deficiency on brain metabolic syndrome. The above experiment examined the effects of a zinc-deficient diet (ZDD) on a rat anorexia model. Second, to comparatively examine how antihistamines interact with *Artemisia absinthium* extract on brain functions related to appetite.

Methods: A total of 40 adult male rats were divided into five groups for experiments. During the experiment, forty mice were divided into five groups, containing eight mice each. Groups Includes: Control group (G1), Zinc Deficiency group (ZDD) (G2), Zinc Plus Cyproheptadine group treatment or treatment Group (G3), Zinc Plus *Artemisia absinthium* group (G4) treatment group. *Artemisia absinthium* and Zinc were administered orally for 30 days. biochemical parameters tests were performed at the end of the examination.

Results: The data revealed that taking zinc deficiency diet (ZDD) in the treatment groups caused a decrease in the insulin level in the cases. On the contrary, the groups treated with Cyproheptadine (CH) and *Artemisia absinthium* (ART) groups showed improvement compared to zinc deficiency diet and recovered almost recovered compared to the control group.

Conclusion: *Artemisia absinthium* (ART) and cyproheptadine (CH) improve insulin and stimulate the brain to secrete it.

Keywords: Anorexia, Cyproheptadine, *Artemisia absinthium*, insulin, rats.



Protective Effects of Silver Nanoparticles of *Moringa Oleifera* leaves against Acrylamide induced Blood Toxicity in Rats.

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Abstract:

It has been demonstrated in the laboratory that acrylamide (ACR) can have carcinogenic effects in experimental. Numerous studies have shown that *Moringa oleifera* leave and seed extract is an effective antioxidant against the harmful effects of free radical attack and oxidative stress. The present study aimed to indicate the harmful toxic effect caused by acrylamide on some blood parameters of rats and the possible protective role of silver nanoparticles of *M. Oleifera* leaves against the toxic effect of ACR. In this study : Twenty adult male albino rats were used for 3 weeks and randomly divided into 4 groups (each of 5 rats): Control group, ACR (50 mg/kg, in drinking water), Acrylamide+MO-NPs group (50 mg/kg, orally at the same time) and MO-NPs/ACR, MO-NPs for 3 weeks (50 mg/kg, orally) then ACR for 3 weeks (50 mg/kg). By the end of experimental period, whole blood samples were collected in clean tubes containing EDTA as anticoagulant for measurement of blood count. Results: It was observed that administration of ACR led to extremely significant decrease in the counts of Red blood cell (RBCs), level of Hemoglobin (HB), Hematocrit (HCT), Mean Corpuscular Volume (MCV) and Lymphocyte (LYM), whereas, the counts of White blood cell (WBCs), Platelets (PLTs), MID cells (Eosinophils and Monocytes) and Granulocyte (GRAN) were extremely significant increased when compared with control group. Treatment with the nano-extract of *M.Oleifera* reduces significantly the toxic effect of acrylamide on the counts of WBCs, PLT, MID and GRAN. Furthermore, a significant increase and influence on the hematological counts of RBCs, HB, HCT, MCV and LYM cells were observed after administration of nano-extract of *M. Oleifera* ($p < 0.05$). In conclusion, these results indicated that The nano-extract of *M. Oleifera* had enhanced the protective effect against the hematological toxicity of ACR in male rats.



Theme 4: Nanotechnology Applications

Silicon-Mediated Improvement of Drought Tolerance in Two Genotypes of Wheat

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Abstract:

Drought is an abiotic stress that affects agriculture and annually causes major setbacks to agricultural productivity. Water scarcity due to decline in the rainfall and increased frequency of dry spells give rise to drought conditions. Silicon (Si) that is the second most abundant element in the soil has been known to alleviate plant drought stress in both the Si-accumulating and non-accumulating plants. Wheat cultivars Suds 14 and Sakha 95 were subjected to drought stress with holding water at 11 days after emergence (DAE) and amended with 2 mM Si as soil application and foliar spray. So, the pots were classified based on the treatment as follows: Control, Control + Si (soil application), Control + Si (foliar spray), drought, drought + Si (soil application), drought + Si (foliar spray). Both soil application and foliar spray treatment with Si improved the drought tolerance in both cultivars. Suds 14 was the most responsive genotype through improving the morphological characteristics as shoot and root length, root volume, number of tillars and number of leaves. In addition, Si treatment maintained water content, prevented chlorophyll degradation and enhanced the total soluble sugars and caused starch accumulation. Moreover, it increased the xylem flow sap and maintained membrane stability compared to control values and drought stressed plants. Si treatment as soil application was more effective than foliar spray in alleviating drought stress in both wheat cultivars.

Keywords: drought, wheat, silicon, growth, membrane stability, sugars.



Extracellular Biosynthesis and Antimicrobial Activity for Zinc Oxide Nanoparticles by *Bacillus* sp. Isolate

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Abstract

Recently, zinc oxide nanoparticles (ZnONPs) have been used in several biological and industrial applications due to their low toxicity, high efficiency, biocompatibility, and cost-effectiveness. The present study investigates the biosynthesis of the antimicrobial ZnONPs by *Bacillus* sp. isolate. The synthesized ZnONPs were characterized using UV-Visible spectroscopy, Fourier transform-infrared (FTIR) spectroscopy, X-ray diffraction (XRD) spectroscopy, Zeta potential analysis and transmission electron microscopy (TEM). The ZnONPs showed good antimicrobial activity against the tested pathogenic bacterial strains; *Bacillus cereus* (Gram-positive bacteria) and *Escherichia coli* (Gram-negative bacteria) as well as the tested pathogenic fungal strains; *Aspergillus niger* and *Fusarium oxysporum*. Here, this cost-effective and simple biological approach for ZnONPs synthesis has emerged with a promising capacity in biomedicine, especially in the fields of antibacterial and antifungal fields.

Keywords: Zinc oxide, nanoparticles, biosynthesis, characterization, antimicrobial.



Application of Nanotechnology in Wastewater Treatment

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Abstract

Water pollution is a major issue in today's and tomorrow's society, and traditional methods are incapable of adequately managing it. Therefore, we must explore innovative and effective treatments. Nanoparticles offer a lot of promising solutions in wastewater treatment. Its unusual surface area and its unique characteristics are employed effectively to remove harmful metal ions, disease-causing microorganisms, and organic and inorganic solutes from wastewater. This paper discusses the use of nanotechnology in the treatment of wastewater contamination in order to ensure the long-term viability of a green environment. It also explored the barriers, problems, and future prospects of nanotechnology for wastewater treatment. The insights offered in this work may provide possibilities and directions for further research into nanotechnology applications for future wastewater treatment. Further study and development are required as the use of nanotechnology in wastewater treatment has shown promising results.

Keywords: Nanotechnology; Wastewater treatment; Sustainability



Characterizing and Categorizing some Organic Solid Waste Biodegradability

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Abstract

The biodegradation process is considered an excellent, widespread eco-friendly treatment option. The majority of recent research is based on chemically determined carbon and nitrogen levels. It is widely documented that a C/N ratio of 20 to 30 promotes appropriate aerobic and anaerobic microbial metabolism. Some organic wastes, however, may include refractory carbon components that are not accessible. Characterization of solid waste is required before it can be used in anaerobic digestion. The amounts of various constituents (carbohydrates, proteins, lipids, and fibers) as well as anaerobic biodegradability (the capacity to create methane) are critical information for characterizing waste. In this paper, to calculate the biodegradable C/N ratio, two techniques for determining aerobic and anaerobic biodegradable organic carbon are suggested and applied to examine a wide range of organic materials. This study also discusses various approaches for assessing solid waste's anaerobic biodegradability. First, we outline the available organic matter characterization assays. Then, in order to evaluate anaerobic biodegradability and biogas output, we correlate an aerobic test with an anaerobic test. The analysis time ranges from 5 to 30 days. Correlation models that use physicochemical properties as input data (total carbohydrate, total nitrogen, fiber, etc.) can predict the quantity of methane generated.

Keywords: Biodegradation; Anaerobic; Aerobic; Organic matter; Solid waste



Variations in morphological traits, net photosynthesis and expression of some genes, and their relation to drought resistance of seven rice genotypes

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Abstract

This study was undertaken to identify morphological traits, net photosynthetic rates and some genes transcription, and their association with drought resistance of 7 rice genotypes. Withholding water (for 12 days) reduced soil water content by about 50-80% of control values and Hybrid 2 genotype caused less depletion in soil water than the other varieties, where it achieved a value of 23 % moisture content. Most of shoot traits were adversely affected by water shortage, and plant dry biomass appeared to be the most affected parameters which were reduced by about 45%. IR64 and PM12 appeared to have the highest drought susceptibility index, whereas Orabi and hybrid genotypes had the lowest values. The expression of NA13 and Cyto P450 -like genes was not altered by drought stress which induced DEP1 expression in Hybrid 2 only. High relative drought resistance of some genotypes such as Orabi3 and Hybrid 2 appeared to be related to their small plant size, low transpiration rate, and high flag leaf width, carotenoids content, net photosynthesis and water use efficiency under the stress conditions.

Key words: Drought index; Gene expression; Leaf Rolling index; Water use efficiency; Phenotypic traits; Photosynthesis.



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Theme 3: Environmental Monitoring Systems

Distribution of Heavy Metals in the Bottom Sediments, their Transfer to the Nile Water, and its Effect on Public Health

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Abstract

Damietta Nile branch is important for the Damietta people, it's the main source of fresh-water that is used in drinking water, agriculture, and industry. The area was exposed to many anthropogenic activities such as fish farms, agriculture, industrial drainage water and domestic wastes discharge. Using a stainless-steel bottom sampling dredge, thirty-three bottom sediment samples were collected from the main-stream of the Nile from eleven sites along the area located in the Damietta Nile branch between Fareskour city and Izbit Al-Burg in front of Ras El-Bar City, the total length is about 32 Km. Samples were analyzed to investigate the distribution and available pollution with heavy metals such as As, Co, Cu, Fe, Sb, Zn, Cd, Se, Ni and Pb. The mean obtained available heavy metals concentrations follow the order $As > Fe > Cu > Zn > Co > Se > Ni > Pb > Sb > Cd$. Abnormally high concentrations levels of (Co, As, Cu, Fe, Ni) were observed. Transfer of heavy metals to the Nile water, Contamination hazards and risk assessments were performed using RISC software Ver. 4. The results of the risk assessment indicate that the heavy metals transfer and concentrations in water are under the allowed limits. The calculated risk assessment indicates that there is no contamination risk from the use of this water for drinking or irrigation.



Disinfection By-products of Ozone and Chlorine in Water Treatment Process

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Abstract

Ozone and chlorine for water disinfection have very similar disinfectant properties. However, their uses today differ due to the environmental consciousness of our society. In Egypt, it must be determine the presence of chlorine and ozone disinfection by-products (DBPs) in treated water. Nile samples were collected from the Damietta water treatment plant intake. The samples of raw water, prechlorination process, and preozonation process were analyzed quantitatively according to the Standard Methods for the Examination of drinking water. Microbiological examinations were total coliform, fecal, total plate count, algal count, and microscopic examination. Also, disinfection by-products (DBPs) of ozone and chlorine were studied. The results indicated that, ozone can be used as a disinfectant for Nile water instead of chlorine, where the optimum dose used was (10 mg/l) higher than that used in the case of chlorine (4.6 mg/l). The concentrations of disinfection by-products of ozone and chlorine were under permissible limits according to the Egyptian standards for drinking water (2007).

Keywords: Drinking water, Disinfectant, Prechlorination process.



Biotreatment of High Organic Load Dairy Wastewater by Sequencing Batch Reactor

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Abstract:

The present study summarized the efficiency of sequencing batch reactor (SBR) for treatment of the dairy manufacture wastewater using two different activated sludge origin (beet cane factory and Mansoura sewage treatment plant). The samples were collected from dairy products manufacturing plants and characterized for some physico-chemical parameters. The treatment process was conducted for the raw and pretreated (alum-lime coagulation process) wastewater samples. The effect of hydraulic retention time (HRT) on the reduction of Chemical Oxygen Demand (COD) of dairy wastewater was investigated in batch mode using the two different activated sludge. The results showed that the removal percentage of COD was 98.8% at a total HRT of 4 hr for the raw dairy wastewater by SBR with 97% removal efficiency. In addition, SBR using Mansoura sewage treatment plant sludge attained 91.5% removal for COD at 8 hr for the raw dairy wastewater and 73.5% for the pretreated dairy wastewater after 8 hr. It's concluded that treatment of raw and pretreated dairy wastewater by SBR technique using beet cane factory sludge was more effective compared to sludge from Mansoura sewage treatment plant.

Keywords: Dairy wastewater, Biological treatment, sequencing batch reactors (SBR).



Theme 4: Nanotechnology Applications

Producing *Pseudomonas Aeruginosa* Strain PAO1

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Abstract

Rhamnolipids, surface active glycolipids mainly known from *P. aeruginosa*, are biosurfactants that have been the focus of many researchers. They show excellent biodegradability, low toxicity, and thus environmental friendliness, and can be produced by using renewable or waste resources while showing comparable physicochemical properties to synthetic surfactants.

Rhamnolipids find their application in many fields ranging from cleaning to applications in food-processing (usually as emulsifiers), enhanced oil recovery (EOR), or even the pharmaceutical sector. However, economic obstacles to their production, like low productivity, comparatively expensive raw material, and relatively high costs for downstream processing, prevented them from being applied in bulk applications.

In this study, *P. aeruginosa* PAO1 produced rhamnolipid (1.82 g/l) during batch bioreactor cultivation using an optimized medium amended with waste



frying oil (considered an environmental disposal problem), as the sole carbon source and under nitrogen limiting conditions.

Proteomics techniques (2D-DIGE, MALDI-TOF, and MALDI-TOF-TOF) were applied to access the proteins potentially involved in the rhamnolipid production pathway and its genetic regulation in the context of different media compositions. We have identified five differentially expressed proteins during rhamnolipid production, including those involved in nitrogen regulation, transportation, and metabolism.

Keywords: *P. aeruginosa* PAO1; rhamnolipid; biosurfactants; bioreactor; batch cultivation; waste frying oil; 2D-DIGE; MALDI-TOF and MALDI-TOF-TOF





In Silico Blind Docking and Molecular Dynamics Simulation of Berberine-loaded Albumin Nano-formulation

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Abstract:

Herein, the current study demonstrates the bioavailability of an optimized berberine-loaded albumin nano-formulation. *In vitro* synthesis, characterization, bioactivity screening and *in silico* molecular modeling of berberine-BSA nanoparticles were performed. Results proved the purity and the size-controlled synthesis of berberine-BSA-nanoparticles. *In silico* Amber12 molecular dynamics and AutoDock4.2 blind docking simulation explicated the best binding modes, hydrophobic and hydrophilic interactions of berberine on BSA (PDB ID; 40Ro) at different pH environments. Antioxidant, antihemolytic and testicular cell differentiated ability of the tested drugs against their nano-formulations were evaluated. This supports the prospective being berberine-loaded BSA nano-formulation synthesized using well-optimized desolvation method upon *in silico* computational approaches would demonstrate better *in vitro* cellular bioavailability.

Keywords: Amber12, molecular dynamics, desolvation, nano-formulation, *in silico*, AutoDock4.2, blind docking simulation, BSA, PDB ID, 40Ro, bioavailability.



Lake Mariout as a Source of Bionanofactories *Streptomyces* sp.: Isolation, Identification, Silver Nanoparticles Biosynthesis and Biological Potentiality

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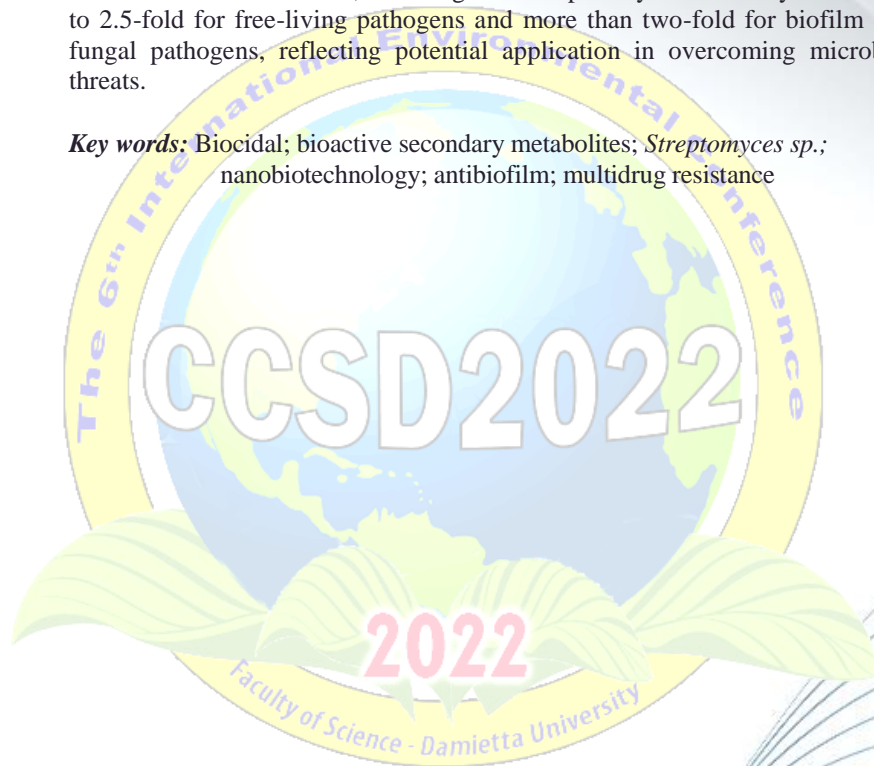
Abstract

Lake Mariout is one of the contaminated marine ecosystems in Egypt, coastal rejoin. It is considered being a reservoir of serious effluents from different anthropogenic activities. Such selective pressure enforces indigenous microbial populations to acquire new advantageous themes. Thus, the current study sheds light on the biosynthesis of AgNPs via two *Streptomyces* sp. strains isolated from Lake Mariout in a simple, less expensive, efficient and eco-friendly approach. Both strains were identified molecularly; their biochemical and physiological characterization revealed their ability to secrete bioactive metabolites with antagonistic activity. the physicochemical properties of the biofabricated AgNPs were pursued. UV-Vis spectroscopy detected surface plasmon resonance at range 458–422 nm. XRD indicated crystalline, pure, face-centered cubic AgNPs; EDX demonstrated strong silver signal at 3.5 keV. Besides, FT-IR and TGA analysis unveiled selfstabilization and functionalization of AgNPs by bioorganic molecules. However, electron microscopy micrographs depicted numerous uniform spherical AgNPs (1.17–13.3 nm). By applying as antimicrobial agent, the biosynthesized AgNPs exhibited promising antagonistic activity versus wide spectrum of Gram-positive and Gram-negative bacteria. AgNPs' recorded ZOI ranged from 0.2



cm by *P. vulgaris* to 0.8 ± 0.1 cm by *B. cereus*. The sensitivity order of examined free-living pathogens against biosynthesized AgNPs is summarized as *B. cereus* > *E. faecalis* > *S. aureus* > *E. coli* > *S. typhi* = *P. aeruginosa* = *K. pneumoniae* > *P. vulgaris*. Additionally, powerful antifungal and antibiofilm efficacy were observed. By combination of AgNPs with secondary bioactive metabolites of both strains, the antagonistic capability increased by 1.125-fold to 2.5-fold for free-living pathogens and more than two-fold for biofilm and fungal pathogens, reflecting potential application in overcoming microbial threats.

Key words: Biocidal; bioactive secondary metabolites; *Streptomyces sp.*; nanobiotechnology; antibiofilm; multidrug resistance





Scaling Up Single Cell Oil Production from Two Different Oleaginous Fungi Using Molasses as a Substrate for Growth

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Abstract

Large scale single cell oil production of the two oleaginous fungi *Alternaria citri* and *Curvularia Sp.* were performed by cultivation both fungus on molasses in a 5L bioreactor. Results revealed that cultivation of *Alternaria citri* on molasses resulted in an increase in biomass from 19.33 g/L to 24.2 g/L and decrease in lipid yield from 5.6 g/L to 5 g/L compared with shake flask experiments. On the other hand, cultivation of *Curvularia Sp.* on molasses resulted in increase in biomass from 16.3g/L to 20.2 g/L and lipid content remain nearly constant 4 g/L. Interestingly, GC-MS data revealed that bioreactor trials of *Alternaria citri* cultivated on molasses resulted in increment in percentage of PUFAs to nearly 30.1% from 25.3% obtained from shake flask with the presence of essential species of omega-6 PUFAs especially Linolenic acid (C18:2) and Gama linolenic acid (C18:3). On the other hand, GC-MS data revealed that bioreactor trials of *Alternaria citri* cultivated on molasses resulted in increment in percentage of MUFAs from 23.9% obtained from shake flask to 29% the most dominant species of omega- 9 MUFAs is oleic acid (C18:1). Thus, this study provides evidence that *Alternaria citri* and *Curvularia Sp.* are considered as promising candidates for economic production of SCO with molasses as a substrate for growth. Also, bioreactor is excellent tool for increasing the percentage of USFAs containing significant amounts of valuable rare USFAS species.

Keywords:



Theme 5: Environmentally Friendly Chemistry

Design, Synthesis, Anticancer Evaluation, DNA binding and Molecular Docking of a novel nanoThiazolo [5,4-b]Pyridine Derivatives

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Abstract:

In trying to develop new anticancer agents, nano 5,7-diamino-6-(benzo[d]thiazol-2-yl)-3-phenylthiazolo[4,5-b] pyridine-2(3H)-thione derivative was designed, synthesized. The design was based on a molecular hybridization approach, and evaluated in-vitro for their anti-proliferative activity against human hepatocellular carcinoma cell line HePG-2, human breast adenocarcinoma MCF-7, colorectal carcinoma HCT-116, and Human prostate cancer PC-3 cell lines using a colorimetric MTT assay.

Additionally, the synthesized compounds are also tested for their in vitro antioxidant activity by DPPH methods in which compounds exhibited good antioxidant activity. The calf thymus DNA binding activity of enaminonitrile thiazole compound and (benzo[d]thiazol-2-yl)-3-phenylthiazolo[4,5-b] pyridine derivative were studied by UV-Vis absorption titration and viscosity measurements also molecular docking of the tested compounds was carried out to investigate the DNA binding affinity of the tested compound with the prospective target, DNA (PDB-: 1BNA). The results suggest that these compounds bind to DNA in an intercalative mode and the intrinsic binding constants (K_b) of diamino-benzo[d]thiazol-2-yl-thiazole and enaminonitrile thiazole with CT-DNA were found to be (7.24×10^5 and $5.59 \times 10^5 \text{ M}^{-1}$). The antimicrobial activities of thiazole derivative was tested against gram negative bacteria (Escherichia coli, Klebsilla pneumonia and Pseudomonas sp), gram



positive bacteria (*Staphylococcus aureus*, *Bacillus cereus*) and fungal (*Aspergillus niger*, *Fusarium oxysporum* and *Candida albicans*). Docking calculations were carried out using Docking Server (Bikadi, Hazai, 2009). Besides, the docking results for synthesized derivatives were in agreement with the in vitro antitumor results.

Keywords: Anticancer; Nano; TEM, DNA binding; Anti-proliferative activity; Molecular docking; Cytotoxicity Thiazolo[5,4-b]pyridine; and Antimicrobial activity





Environmentally- Friendly Method for the Control of Corrosion and Deposition of Scales by Herbal Extract in Water Systems

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Abstract

Calcareous scaling on heat exchangers and petroleum production equipment surfaces is often the persistent problem in cooling water systems, boilers, secondary oil recovery and desalination plants. Scales cause severe economic loss, since it limit heat exchange and can reduce tube diameter causing a significant decrease in water flow. In order to solve this problem many scale inhibitors have been used in cooling water systems. It has been known for some decades that it is possible to prevent scale growth by addition of small amounts of organic substances to cooling water solution such as gelatin, carboxymethyl cellulose and keratin. At the present time, polyacrylic acid, polyacrylamide and various phosphonates have been widely utilized in industry as an efficient antiscalent. Recent studies have shown that some copolymers are effective as a scale inhibitor since these copolymers are able to stabilize and alter the crystal polymorphs. Per Kjellin investigated a water soluble copolymer that consists of a poly (ethylene glycol) chain containing phosphate groups attached to a methyl terminated poly (propylene) glycol as scale inhibitor. This copolymer was found to adsorb strongly onto the metal surface and prevent crystallization by a surface competitive effect. Previous



studies have shown that 1-hydroxyethane-1, 1-diphosphonic acid (HEDP) has excellent properties for calcium carbonate dissolution, promote structure modifications in deposits and has some corrosion inhibiting features.

This study has mainly explored the possibility for using some natural products as antiscalants and anticorrosion in cooling systems used in desalination plants, pharmaceutical and food industries. This study seeks to undertake laboratory-based to investigate formulations containing herb (*Arghel*), extract as novel environmentally scale and corrosion inhibitor for simulated cooling water solution.

Intercomparison study between optimum dose of *arghel* leaf extract and chemical mix which used in petrochemical industry were carried out. The results indicted that, both types of inhibitors have a dual function effect as antiscalent for CaCO_3 deposit and as corrosion inhibitor. The results clarify that, *arghel* leaf extract is more efficient as antiscalent and as anticorrosion than chemical mix. On the other hand, *arghel* leaf extract is more environmentally friendly inhibitor and has low operating cost than chemical mix.

Arghel extract is *environmentally friendly* inhibitor and has *low operating cost* than chemical mix. It was recommended to use *Arghel* extract in the closed cooling systems to reduce the amount of water used in the cooling process. No reference to the use of herb as a corrosion and scale inhibitor has been found in literature: it is thus believed to represent a potentially new, environmentally safe inhibitor suitable for treating cooling water systems.

Keywords: Scales; Corrosion; *Arghel* Herbal extracts; Brine solution; EIS; Chronoamperometry; Optical microscope examination; SEM; IR; Electrochemical Impedance Spectroscopy; Potentiodynamic Polarization.

Theme 6: Natural Resources and Ecosystems Preservation

الموارد المائية بليبيا تحديات الحاضر وتدبير مواجهة تدهورها

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الملخص:

إن حياة السكان وبقاؤهم وارتباطهم بوجود الماء له أهمية كبيرة فالماء مادة أساسية تركز عليه جميع متطلبات الإنسان ونشاطاته المختلفة، وأن أي تأثير يطرأ على هذا العنصر يؤثر سلبا على الكائنات الحية وخاصة الإنسان.

و تتعرض المياه الجوفية في ليبيا الى استنزاف بسبب الضخ الجائر في الزراعة و الصناعة وكذلك النمو السكاني المتزايد وما صاحبه من تطور اجتماعي واقتصادي مما ادى الى زيادة العجز المائي واستنزاف خزانات المياه السطحية مما سبب وجود فجوة بين ما هو متاح ومم موارد مائية لسد الاحتياجات المتزايدة.

وتعتبر المياه السطحية المتوفرة في المناطق الشمالية من اهم المصادر للبلاد حيث تم تنفيذ ستة عشر سدا رئيسيا للمحافظة على مياه الامطار بسعة اجمالية تقدر بحوالي ٣٨٥ مليون متر مكعب من الماء.

حيث من المتوقع بحلول عام ٢٠٣٥ زيادة الطلب في المعدل المائي لمياه الشرب والاستعمال المنزلي قد يصل الى اكثر من ١١٠٠ مليون متر مكعب لتغطية احتياج ٨,٢ مليون نسمة .

ولمواجهة تدهور ونقص المياه تم تنفيذ مشروع النهر الصناعي الذي يهدف الى نقل ٦,١٨ مليون متر مكعب من المياه يوميا من الصحراء الى التجمعات السكنية والاراضي الزراعية الخصبة في الشمال عبر انابيب خزسانية ضخمة بطول حوالي ٤٠٠٠ كم .

كما ان العيون والينابيع الموسمية ودائمة الجريان بكافة ربوع البلاد ذات اهمية قسوى حيث يستفاد منها في الري والزراعات المختلفة ويحل عددها حوالي ١٥ عينا ولعل اكثرها انتاجية عين الزيانة ١٢٠ مليون متر مكعب السنة وعين تاورغاء ٦٠ مليون متر مكعب السنة، كما يوجد العديد من الاودية الموسمية المخلفة سيولا تصب نهايتها في في البحر مثل وادي سوف الجين ووادي كعام ووادي المجنين ووادي القطارة وغيرها .

وتهدف هذه الدراسة إلى التعريف بمصادر المياه الطبيعية وأهمية مجابهة تدهورها واستنزافها .



مبادرة اللافندر السعودي الواقع – الأبحاث – التطلعات

علي عبد الله البكري، إيمان محمد النشار

المخلص

نبتة اللافندر (Lavender) أو كما تسمى محلياً بالمملكة العربية السعودية الخزامى/الضرم هي نبتة محلية تعيش فوق قمم وسفوح جبال السروات جنوب غرب المملكة. تمتاز بالعديد من المزايا والفوائد المختلفة مما جعل المجتمعات المحلية تعتمد عليها في عدد من الاستخدامات الطبية، والتجميلية، والوقائية وفي الصناعة لبعض المنتجات كإقتصديات ريفية. ونظراً لوجود عددٍ من المؤشرات تنذر بإمكانية تلاشي تلك النبتة وانقراضها جاءت (مبادرة اللافندر السعودي) لتعيد استزراعها وتعزيز الاستعادة منها... وتفعيل دور المجتمع المحلي في هذا المجال ولكن اعتماداً على نتائج أبحاث علمية ودراسات جدوى وعمل مؤسسي محوكم. تسعى هذه الورقة إلى التعريف بمبادرة اللافندر السعودي، وذراعها البحثي (كرسي أبحاث اللافندر والنباتات العطرية واقتصادياتها) والتركيز على الجانب البحثي الحالي والمرتبب للكرسي وما تثمر عنه تلك الدراسات والأبحاث، وإخضاع الاستخدامات السابقة للتحليل والتأكد، والاسترشاد بأفضل التجارب والممارسات العالمية في هذا الجانب وتكييفها مع العوامل والظروف والمعطيات المحلية.

2022

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تطبيق أبعاد التسويق التفاعلي للنهوض بالسياحة العلاجية بمنطقة وادي النطرون

اسماء سعيد الاسرج & محمد فتحى عزازى

قسم مسوح الموارد الطبيعية - معهد الدراسات والبحوث السياحية والموارد الطبيعية - جامعة مدينة السادات

ملخص البحث

يهدف هذا البحث إلى تطبيق ابعاد التسويق التفاعلي لدعم السياحة العلاجية بمنطقة وادي النطرون – مصر والهدف الرئيسي هو إلقاء الضوء على السياحة العلاجية وتطبيق عملية التسويق التفاعلي والذي يتحقق من خلال الأبعاد الثلاثة (الإتصال- الثقة - الإلتزام) وتأتى أهمية منطقة وادي النطرون ومكوناتها السياحية المختلفة من تاريخها الديني والبيئة الطبيعية، ومن هنا تهدف الدراسة إلى وضع منطقة وادى النطرون على الخريطة السياحية بشكل جيد وبالتالي محاولة وضع خطة تنمية سياحية تركز على مبادئ الإستدامة بهدف الحفاظ على الموارد والمكونات وتطويرها بشكل مستدام، لذلك تم إختيار عينة البحث بطريقة عشوائية تكونت من ١٢٠ فرد من العاملين والمختصين في القطاع السياحي بوادى النطرون وكذلك بعض المرضى وتكونت أداة البحث من استبيان يتكون من ٣٠ فقرة ، وأظهرت نتائج البحث أن هناك علاقة ارتباط قوية بين تطبيق ابعاد التسويق التفاعلي ومدى دعم السياحة العلاجية بمنطقة وادي النطرون ، وفي ضوء هذه النتائج تم إقتراح مجموعة من التوصيات أهمها ضرورة تذييل كل العقبات التي تواجه تنمية السياحة العلاجية لاسيما في منطقة وادى النطرون بمصر.

الكلمات المفتاحية: التسويق التفاعلي، السياحة العلاجية، وادى النطرون

Applying the Dimensions of Interactive Marketing to Get Up Medical Tourism in the Wadi El-Natrun Region

Abstract

The study aimed to investigate "Applying the Dimensions of Interactive Marketing through the three dimensions (communication - trust - commitment) to support Medical Tourism in the Wadi El-Natrun Region". The sample of the study was randomly selected, consisted of (120) person from working in the tourism sector in Wadi El-Natrun and also some patients. The tool of the study is a questionnaire containing (30) items.

The results showed that there are no significant differences between the dimensions of interactive marketing and the support of medical tourism in the Wadi El-Natrun Region. In light of the results of the study, the researcher proposed a series of recommendations, including: the need to overcome the



challenges and obstacles that prevent applying the dimensions of interactive marketing to support medical tourism in the Wadi El-Natron region.

Key Words: Interactive Marketing, Medical Tourism, the Wadi El-Natron Region.





المحاضرات العامة

- أ.د/ هشام الأسمر ١
أستاذ الجيولوجيا – قسم الجيولوجيا – كلية العلوم - جامعة دمياط
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- أ.د/ إبراهيم حسن ٢
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Climate Change Impact on Biodiversity and Ecosystem in the Contest of Sustainable Development
- أ.د/ فتحي عبد العاطي عبد الغفار ٦
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"The Sewage Oxidation Ponds as Natural Habitats for Migratory Birds. the National Effort of in Biodiversity Preservation – Egypt."



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	الجلسة العلمية ٣ & ٤ بالتوازي (قاعة أ & ب) ٣:٠٠ - ١:٠٠
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أ.د/ قدري عبد القادر البكري

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عميد الكلية

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أ.د/ السيد محمد دعور

رئيس الجامعة

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٠٢:٠٠ – ٠٤:٠٠

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لجنة الضيافة	م م / محمد الزاهد
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لجنة الشئون الادارية مسئول الخزينة بالكلية	ا / عبده الشعراوي
لجنة الشئون الادارية مدير مكتب العميد	ا/ ايمن عبد العال
لجنة الشئون الادارية مدير مكتب وكيل البيئة	ا / محمد طلعت البغدادي
لجنة الشئون الادارية الخدمات الالكترونية	ا/ محمد ايمن

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رئيس قسم الحبيولوجيا - كلية العلوم - جامعة دمياط

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رئيس اللجان المنظمة

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راس البر



راس البر، هي مدينة ومصيف في محافظة دمياط، شمال شرق مصر. تطل على البحر المتوسط، عند مصب نهر دمياط، أحد روافد نهر النيل، في مقابل عزبة البرج. يسكنها حوالي ٢٥,٠٠٠ نسمة، وفي موسم الصيف، من يوليو إلى سبتمبر، يزداد عدد سكانها إلى أكثر من ٢٥٠,٠٠٠ نسمة. يوجد برأس البر التقاء نهر النيل ومصبه بالبحر المتوسط وهو ما يعرف باللسان.

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Faculty of Science - Damietta University

محافظة دمياط

محافظة دمياط هي إحدى محافظات جمهورية مصر العربية. تقع المحافظة في الجزء الشمالي الشرقي من الدولة، يبلغ عدد سكانها أكثر من مليون شخص، وعاصمتها هي مدينة دمياط.



تشتهر عاصمة المحافظة بمزارع الجوافة، بالإضافة لأشجار النخيل التي تملأ الساحل من رأس البر شرقاً حتى جمصة غرباً. تصدر المحافظة الملايين من أشجار النخيل إلى العديد من الدول كل سنة، ومنها اليونان والصين. تنتج أيضاً دمياط القمح، القطن، الأرز، البطاطس، الليمون، العنب والطماطم. تشتهر أيضاً المحافظة بصناعة الحلويات، تعليب السردين وصناعة الأثاث الخشبي الممتاز الذي يصدر لجميع دول العالم وتصنيع الجبن الدمياطي. أيضاً تمتلك المحافظة أحد أقدم المصايف في مصر مدينة رأس البر، التي توجد بها نقطة التقاء نهر النيل بالبحر الأبيض المتوسط. كذلك تعد حرفة الصيد أحد أهم الحرف في المحافظة ويعمل بها عدد كبير من السكان، خاصة سكان السواحل، ويمثل رمز القارب في شعار المحافظة حرفة الصيد المنتشرة بها.

دمياط الجديدة



تقع مدينة دمياط الجديدة في شمال محافظة دمياط وعلى ساحل البحر الأبيض المتوسط بطول 5 كم وتبعد حوالي 4.5 كم إلى الغرب من ميناء دمياط الجديدة وتشغل مساحة 18 كم² وتستوعب 270000 نسمة بحلول عام 2020 م، تحيط بالمدينة من الشرق والجنوب مساحات خضراء ذات طبيعة جذابة متمثلة في غابات النخيل وأشجار الفاكهة

مكونة موقعاً سياحياً فريداً، يمتد الطريق الدولي الساحلي بجوار شاطئ البحر المتوسط ويعبر من خلال شاطئ مدينة دمياط الجديدة، وقد جعل ذلك الطريق حركة النقل والمواصلات أسهل بين مينائي دمياط الجديدة والإسكندرية وأسرع. ومن أشهر شوارعها شارع حسب الله (الكرراوي) (الصعيدي) وشارع 100 وشارع الجامعة والمنطقة المركزية.



إدارة الكلية



أ.د/ محمد إسماعيل أبو دبارة

عميد الكلية



أ.د/ أمينة عبد السلام
البطراوي

وكيل الكلية لشئون
خدمة المجتمع وتنمية
البيئة



أ.د/ ناصر عبده الغماز

وكيل الكلية لشئون
التعليم والطلاب



أ.د/ قدري عبد القادر
البكري

وكيل الكلية للدراسات
العليا والبحوث

كلية العلوم



كلية العلوم جامعة دمياط هي صرح العلم والمعرفة ومنارة الفكر والإبداع ومركز الفكر والتنوير بجامعة دمياط وتحمل لواء الريادة في مجالات العلوم الأساسية. أنشئت كلية العلوم بموجب القرار الجمهوري رقم (٣٠٣) لسنة ١٩٨٥ وبدأت الدراسة فيها في العام الجامعي ١٩٨٦/١٩٨٥ بتنفيذ لائحة كلية العلوم جامعة المنصورة واستمر العمل بها حتى العام الجامعي ١٩٩٠/١٩٩١ وتخرجت أول دفعة في نهاية العام الجامعي ١٩٨٨-١٩٨٩. اعتباراً من العام الجامعي ١٩٩١/١٩٩٢ بدأ العمل باللائحة الداخلية للكلية بموجب القرار الوزاري رقم (٨٨٩) بتاريخ ١٩٩١/٩/٢. صدر القرار الجمهوري رقم (١٩) لسنة ٢٠١٢ بإنشاء جامعة دمياط. وقد روعي بها ألا تكون الدراسة بالكلية على النمط القديم ولكن تكون مسيرة للتطور العلمي ولمعالجة المشاكل الجديدة وأهمها البيئية. تضم كلية العلوم سبعة أقسام علمية وهم: قسم الكيمياء – قسم الرياضيات – قسم الفيزياء – قسم النبات والميكروبيولوجي – قسم علم الحيوان – قسم الجيولوجيا – قسم العلوم البيئية.



إدارة الجامعة



أ.د/ السيد محمد دعور

رئيس الجامعة



أ.د/ وائل فاروق
الطيباني

نائب رئيس الجامعة
لشئون التعليم والطلاب



أ.د/ حمدان ربيع المتولي

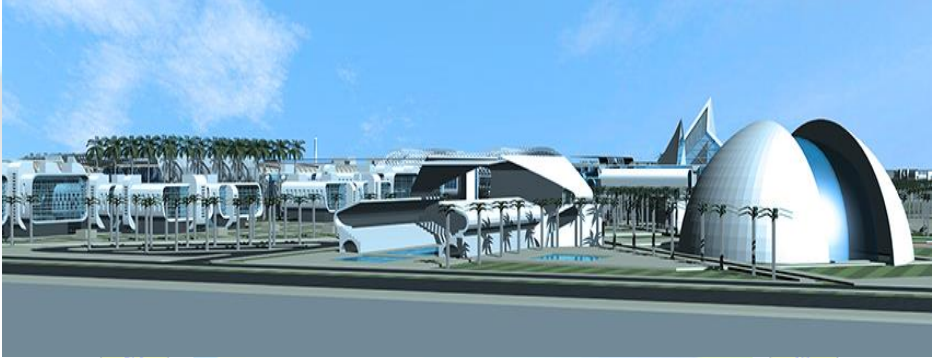
نائب رئيس الجامعة
للدراسات العليا والبحوث



أ.د/ عبد الحميد عبد
الفتاح خضر

نائب رئيس الجامعة
لشئون خدمة المجتمع
وتنمية البيئة

جامعة دمياط □



نشأت فكرة فتح بعض كليات الجامعة بمدينة دمياط عندما تزايدت أعداد طلبة جامعة المنصورة من أبناء دمياط في الكليات المختلفة، ثم صدرت قرارات إنشاء كليات الفرع تبعاً طبقاً للوائح الكليات المناظرة بجامعة المنصورة فبدأ العمل بكلية التربية في العام الجامعي ١٩٧٦-١٩٧٧، وقد تلي ذلك كليتي العلوم والتجارة في العام الجامعي ٨٥-١٩٨٦ ثم تبعهما كلية التربية النوعية في العام ٩٠-١٩٩١ ثم كلية الفنون التطبيقية في العام ٢٠٠٤-٢٠٠٥ فكليات الزراعة والآداب والتربية الرياضية في العام الجامعي ٢٠٠٦-٢٠٠٧.

وفي عام ٢٠٠٧ صدر القرار الجمهوري رقم (٢٧٦) بإنشاء فرع جامعة المنصورة بدمياط واندك كانت ثلاث كليات تقع في حرم واحد بحي الأعصر بمدينة دمياط وهي كليات الفنون التطبيقية والآداب والزراعة أما باقي الكليات الخمس فتقع في أماكن متفرقة بمدينة دمياط الجديدة وهي كليات العلوم والتربية والتجارة والتربية النوعية والتربية الرياضية إضافة إلى إدارة الفرع وإسكان الطلاب وإسكان الطالبات. في شهر يوليو ٢٠١٢ صدر القرار الجمهوري رقم ١٩ لسنة ٢٠١٢ بإنشاء جامعة دمياط ومقرها مدينة دمياط الجديدة

تضم جامعة دمياط الآن ١٤ كلية: كلية التربية، كلية العلوم، كلية التجارة، كلية التربية النوعية، كلية الفنون التطبيقية، كلية الآداب، كلية الزراعة، كلية التربية الرياضية، كلية الهندسة، كلية الحقوق، كلية الآثار، كلية التمريض، كلية الحاسبات والذكاء الاصطناعي وكلية الطب البشري

تتميز دمياط الجديدة بموقعها المتفرد على الطريق الدولي الذي يربطها بمحافظة الدقهلية كفر الشيخ - البحيرة - بورسعيد - منطقة القناة. كما تتميز البيئة المحيطة بجامعة دمياط بمصادر ثرواتها الطبيعية والصناعية والسياحية، مما يعكس أهمية الدور الذي يمكن أن تقدمه جامعة دمياط نظراً للتنوع العريض في الموارد الاقتصادية والطبيعية في هذه المنطقة وما يتطلبه ذلك من إعداد كوادر مهنية وفنية متميزة.



المؤتمر البيئي الدولي السادس

التغيرات المناخية والتنمية المستدامة

دمياط الجديدة – رأس البر ٣-٥ أكتوبر ٢٠٢٢

تحت رعاية

أ.د/ السيد محمد دعكور

رئيس جامعة دمياط

أ.د/ محمد أيمن عاشور

وزير التعليم العالي والبحث العلمي

تحت إشراف

أ.د/ جوهان ربيع الهتولى

نائب رئيس الجامعة للدراسات العليا
والبحوث

أ.د/ عبد الحميد عبد الفتاح خضر

نائب رئيس الجامعة لشئون خدمة
المجتمع وتنمية البيئة

اللجنة المنظمة

أ.د/ محمد إسماعيل أبو دهبارة

عميد الكلية

رئيس المؤتمر

أ.د/ قدرى عبد القادر البكري

وكيل الكلية للدراسات العليا والبحوث

أ.د/ أونيرة عبد السلام البطراوي

وكيل الكلية لشئون خدمة المجتمع وتنمية
البيئة

أمين المؤتمر

مقرر المؤتمر



جامعة دهباط - كلية العلوم



المؤتمر البيئي الدولي السادس

التغيرات المناخية

والتنمية المستدامة

2022

دمياط الجديدة رأس البر

٣-٥ أكتوبر ٢٠٢٢