

Established by Diffused U Der MSA UNIVERSIT

### DISTINGUISHED GRADUATION PROJECTS

## **YEAR** 2019-2020

#### **Message from MSA University Head of Board of Trustees**



As the global community moves into the 21st century, the significance of educating a new generation of entrepreneurs and transformative leaders equipped with the intellectual perspective of liberal learning and tools is as important as any other time in history.

The ability to think critically, to write and speak clearly, to make ethical judgments, to innovate and accelerate innovative concepts, build entrepreneurial mindsets and to understand the fundamental economic forces, these are the qualities essential to effective leadership in our ever-changing global environment. These are the essences and hallmarks of a MSA education.

Producing career-ready graduates has always been central to our mission. Through a process that includes career exploration and professional preparation, we connect you with career paths and foster the skills and mindset needed for professional advancement.

> Dr. Nawal El Degwi Head of Board of Trustes

#### **Message from MSA University President**



We are committed to the relentless pursuit of excellence in education and research. The MSA community is deeply committed to contributing to a better future for Egypt. Our success can be contributed to many factors: our talented and dedicated faculty, the energy, enthusiasm and inventiveness of graduate and undergraduate students, the dedication and support of excellent staff, the passion of our alumni to make a difference in their communities, the support and active engagement of our international partners.

We aspire to position MSA as a research-intensive and student-centred university, which fosters an institution-wide commitment to creating a strong, healthy future for our students and for our local and global communities and to become a national leader in many areas of critical research and creative endeavor. We take pride that our faculty are committed and inspiring teachers that, offer our students a research-enriched education complemented by applied, clinical and work-integrated learning opportunities.

In the Distinguished graduation yearbook, we proudly see results to all of the above.

With your research and innovation, I look forward to seeing where that momentum will take us next as I am confident that you can.

Prof.Dr. Khayri Abdel-Hamid University President

#### FACULTY OF ARTS & DESIGI

#### **Cairo International Child Film Festival**



Marian Magdy





#### ABSTRACT

The Cairo International Child Film Festival is an Egyptian Child Film Festival that runs annually in Egypt and hosts both national and international films about children issues and topics and made by children. The festival is organized by the Egyptian ministry of culture and has been running for 25 non-consecutive years.



#### Toota Toota



Nada El Sayed Abdel Bary



#### ABSTRACT

Storytelling is one of the most important methods of developing Children's cognitive skills in a fun way. Unfortunately, over the years, storytelling has diminished as technology took over. Despite the various efforts carried out recently to bring storytelling back, the percentage in Egypt remains low in comparison to other countries. Therefore, I chose Toota Toota to help improve this situation.



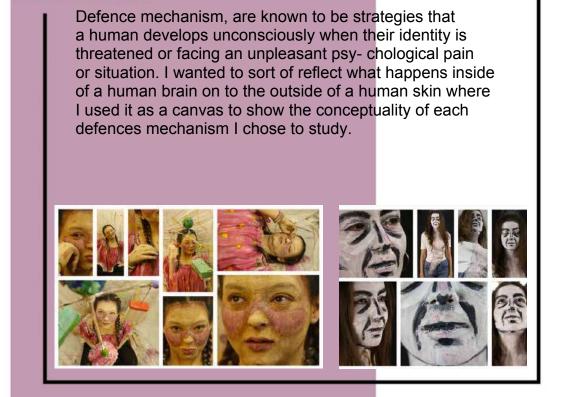
#### We're All Young Here "Anta"



Farah Khaled

ABSTRACT





#### Reflection



Rana Ashraf

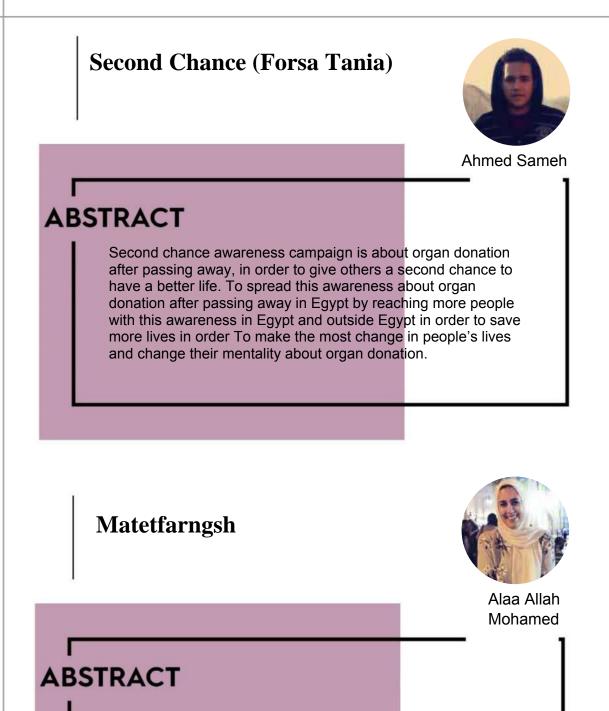


#### ABSTRACT

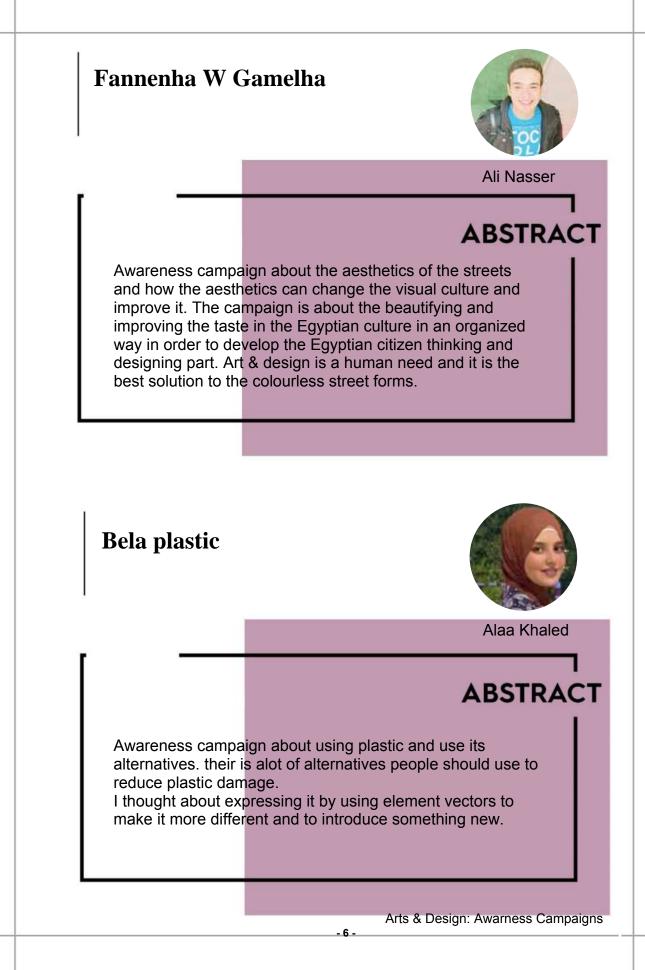
Self-love is the concept of self-acceptance and appreciation; accepting yourself as you are without needing approval from others to feel worthy. Treating yourself with kindness and forgiveness. And to not expect from people to accept you before accepting yourself first. The character design shows that being different is not a flaw. The dark laughing figures represent society and the gun finger sign symbolizes the negative impact of vicious words on people.







This Project is concerned with the preservation of our national language (Egyptian) because if we lose the language we will gradually lose our identity. The project targets the awareness of Egyptian youth to protect their national language. At the same time, the project doesn't oppose the idea of acquiring foreign languages, but it's against deforming or replacing our language



#### El Nafsia Aham Men El Thanwia



Alya Hassan

#### ABSTRACT

I choose this project beacuse i noticed that many of students that suffer from the same problem over past years and how it effect badly on their mental health the number of depression and psychological problems, increase every year from the year to the year before. So I found that I could make an awareness campagin to aware parents and the society about this problem and to give them the ways to solve this problem in creative and easy ways.

Weladna

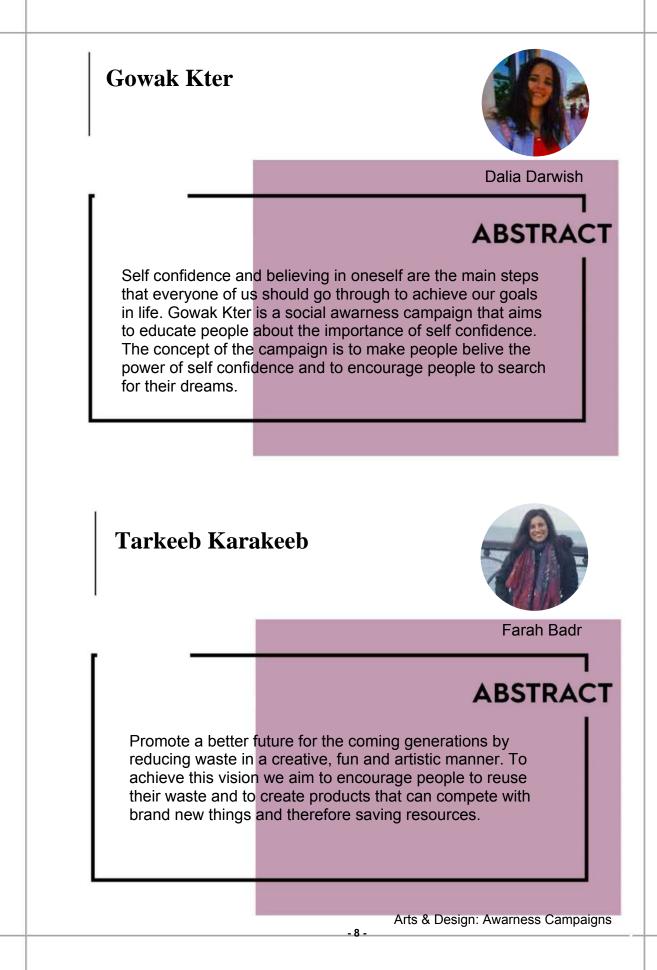


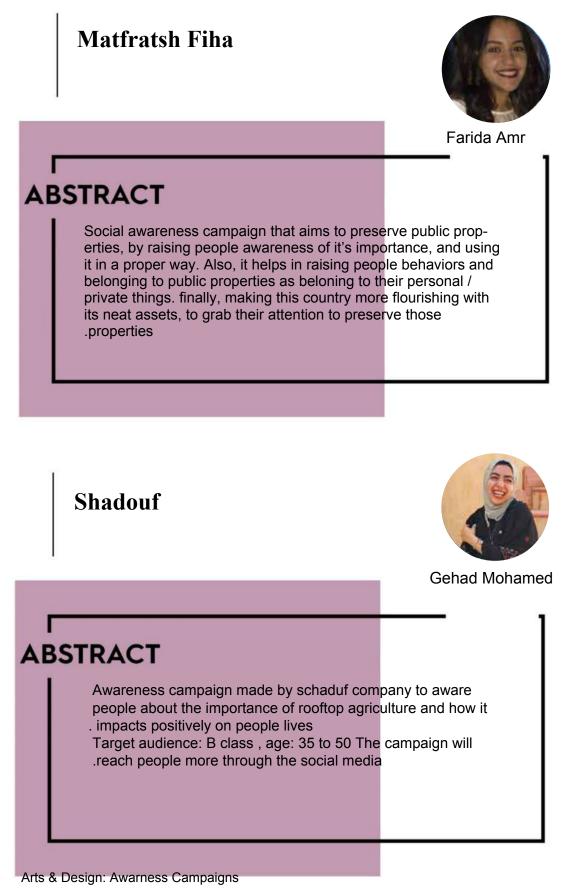
**Bassant Sherif** 

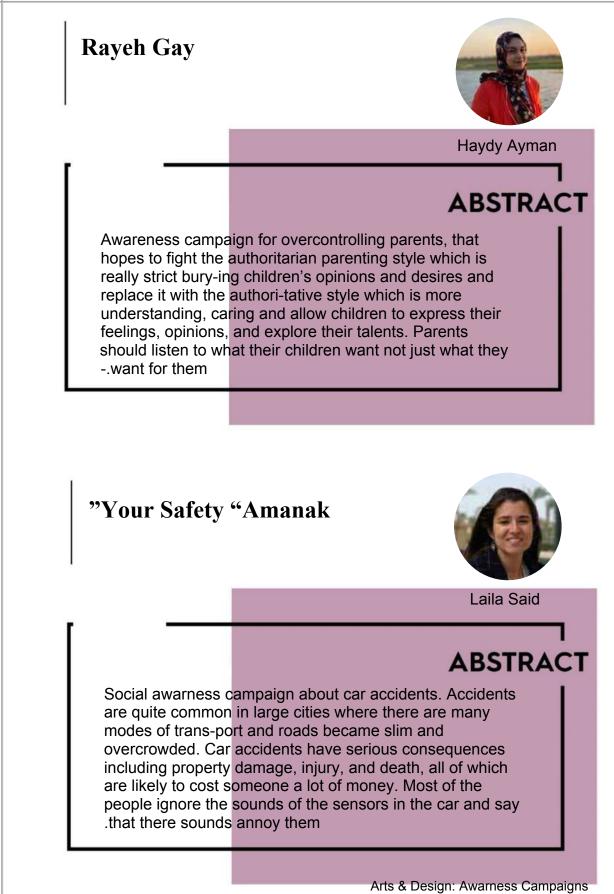
#### ABSTRACT

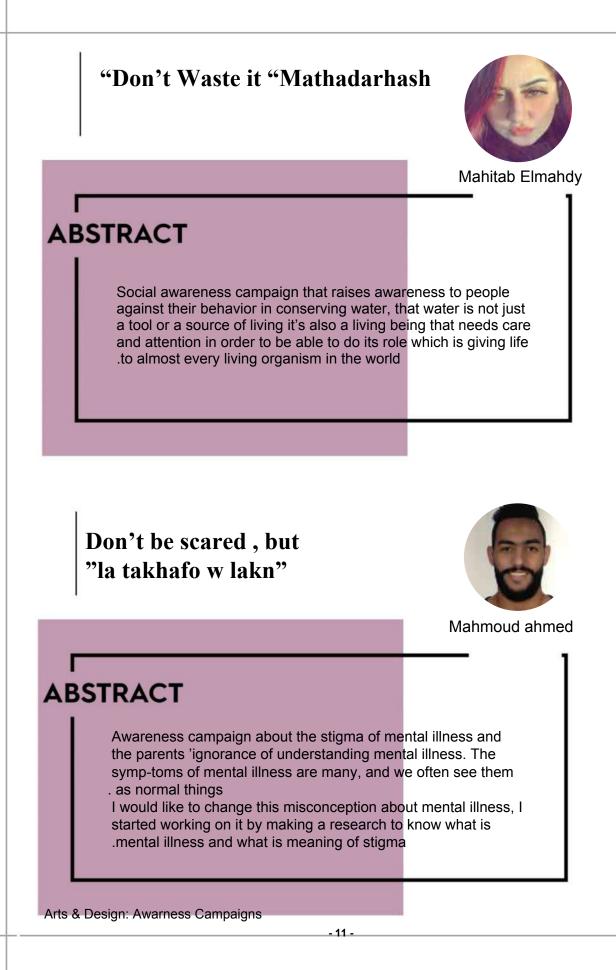
awareness campaign focuses on enhancing the relationship between parents and their children and make parents aware that their children need their attention and talks to guide them through life because many parents have become busy with their children or do not care about the need to build a dialogue between them and do not realize how important this is, so this sentence tries to alert them to this problem and the need to fix it.

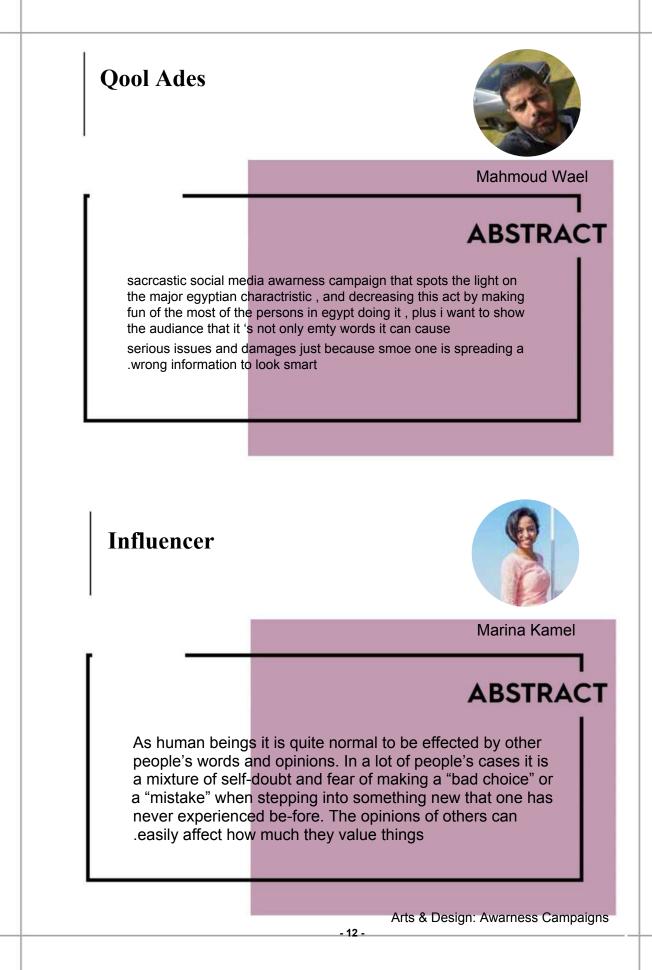
Arts & Design: Awarness Campaigns

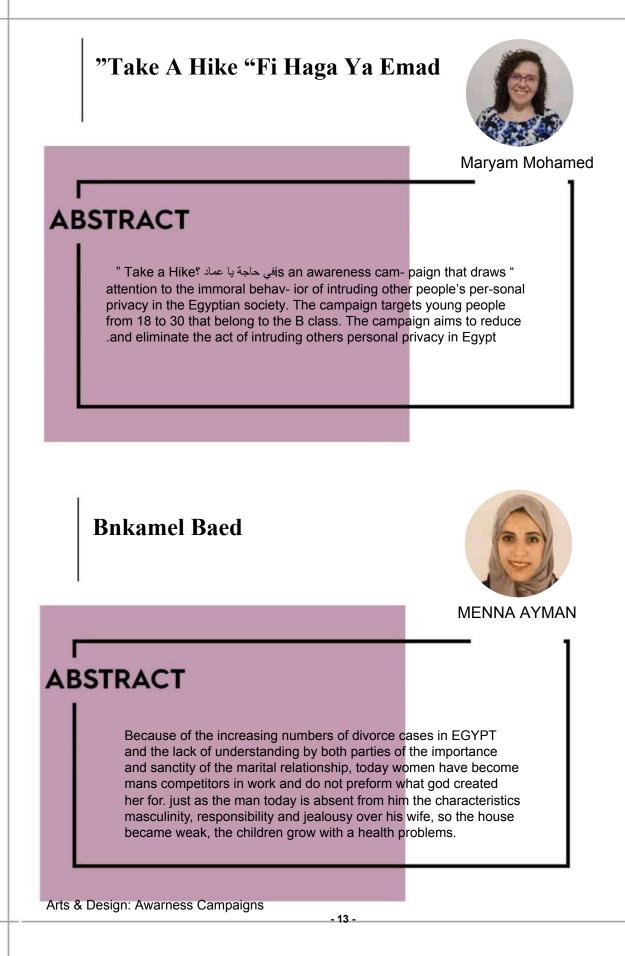


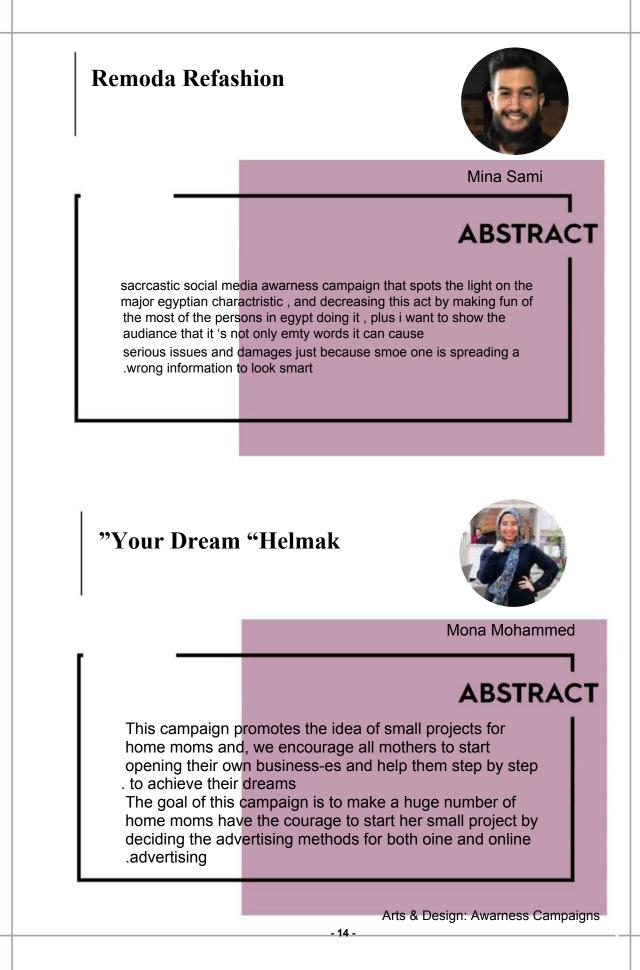




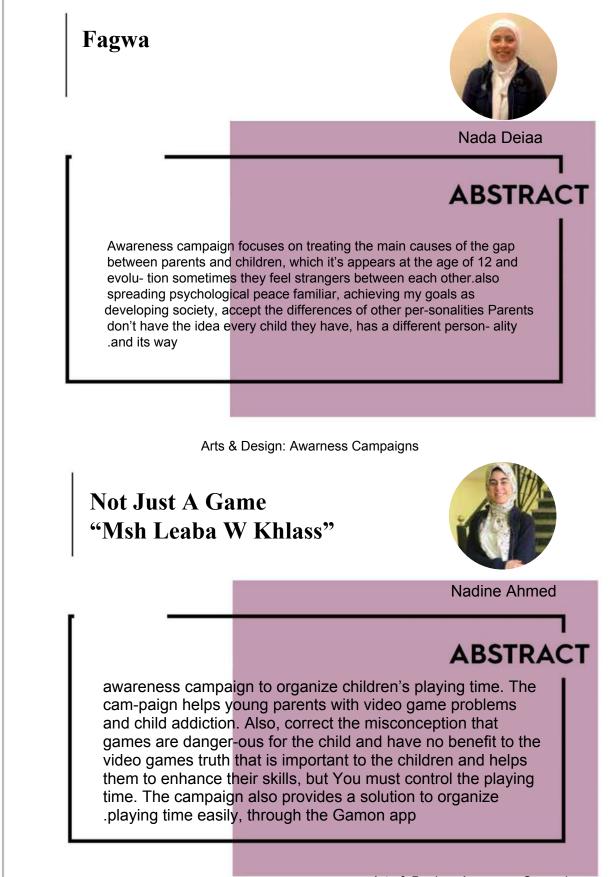












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# "By Your Hand "B Edek Image: Constraint of the second second

The project aims to empower women, especially housewives, in or-der to make optimal use of their abilities and promote their commu-nities through the handicrafts. provides women with the opportunity of work, produce and even manage the project from their home, which then become a benefit for her by Achieving financial return and independent income that can be increased with each success and development of the .project in a favorable business climate

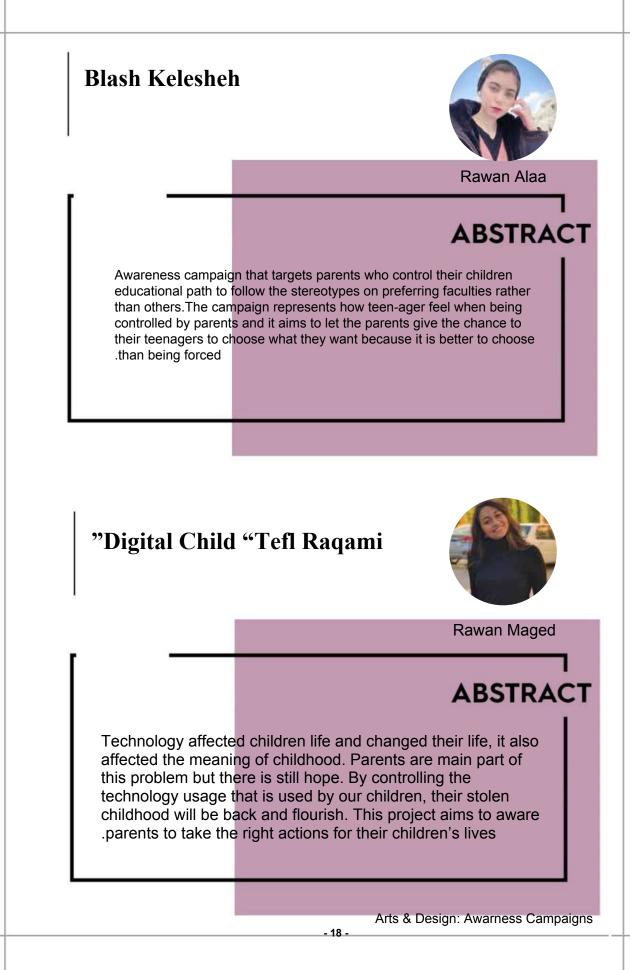
#### A Tale in the Palace "FI EL KASER HEKAIA"



Rania Refat

#### ABSTRACT

This project aims at spreading cultural awareness and encouraging domestic tourism. It is based on the idea of calcifying all 70 palac-es found in Cairo city into four categories, each represented by a different color; these four categories are Royal, Foreign, Early and late Islamic. The project also depends on a main dominant color which is the gold .color that reflects the idea of the project



#### Not All White Is Better "Msh Kol Abiad Kher"



**Reem Mohamed** 

#### ABSTRACT

Awareness campaign against white toxins (sugar, salt, and flour) to educate people about the danger of excessive intake of many white toxins in the care of products that we eat constantly and is consid-ered addiction and, and not everything that is white is considered good and not all that they think is good white and they are They consider skullers, salt, and flour as white poison .when using more than the allowable limit

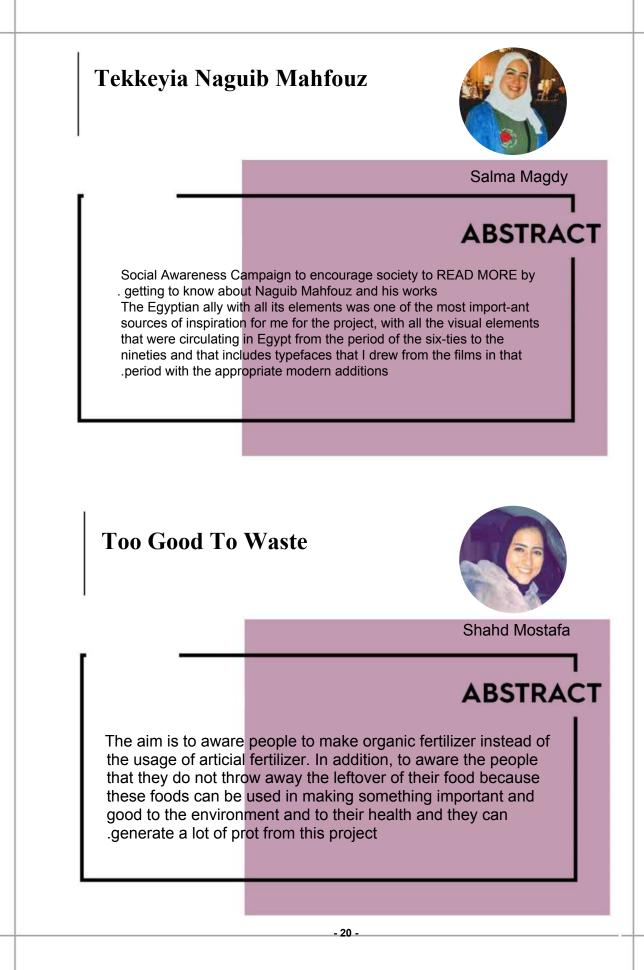


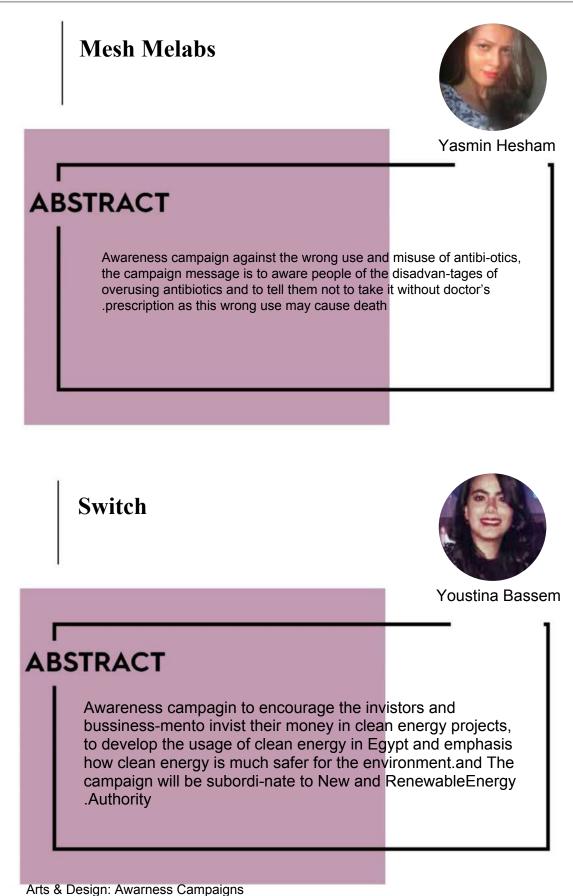


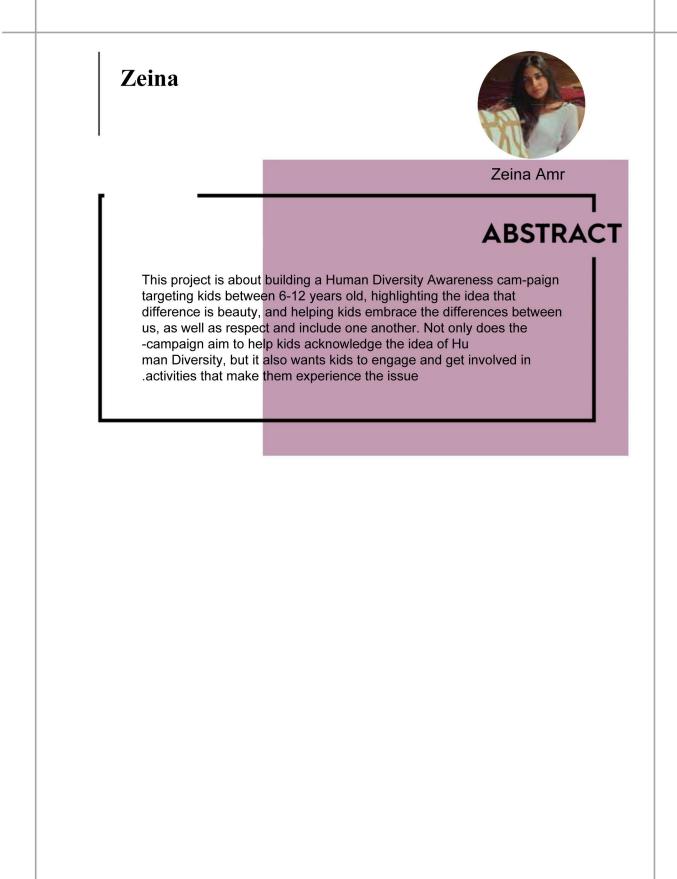
**REEM SOFIAN** 

#### ABSTRACT

Awareness campaign that supports the idea of foster care for a child as well as showing the advantages of foster care for the par-ents child and .community







Arts & Design: Awarness Campaigns



Khodarco

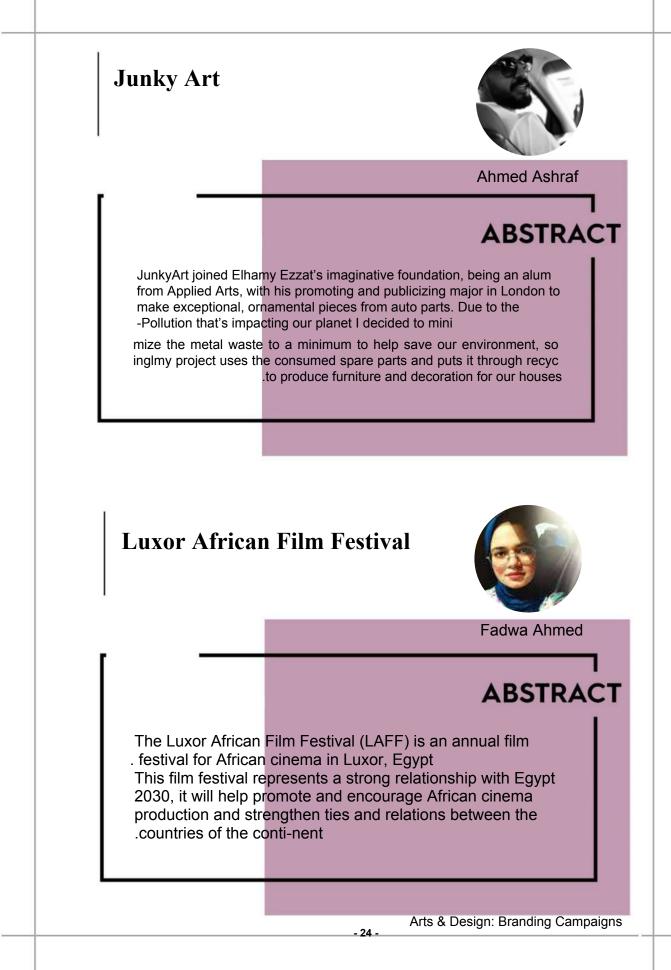


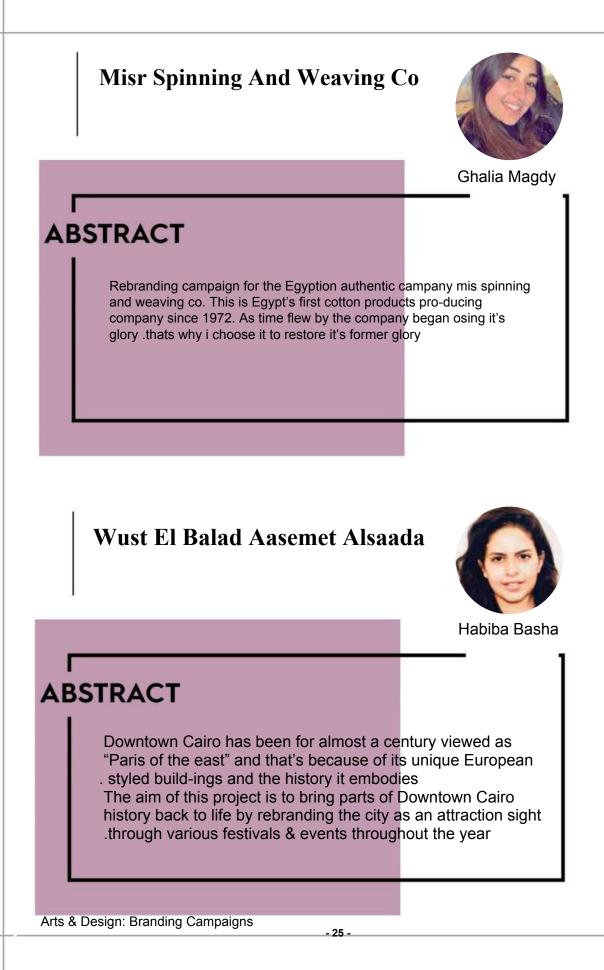
Mariam Heider

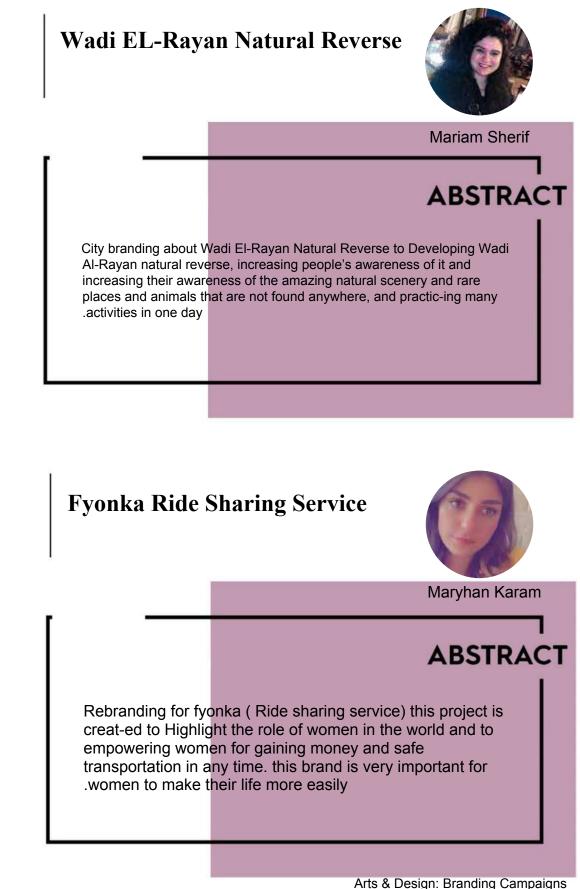
#### ABSTRACT

Khodar-Co is a startup company using the new technology of farm-ing which is aquaponics "is a method of growing plants in a water based, nutrient rich solution. aquaponics does not use soil" which will save a lot of water as water is recycled and also will produce clean and .healthy food and increase the production

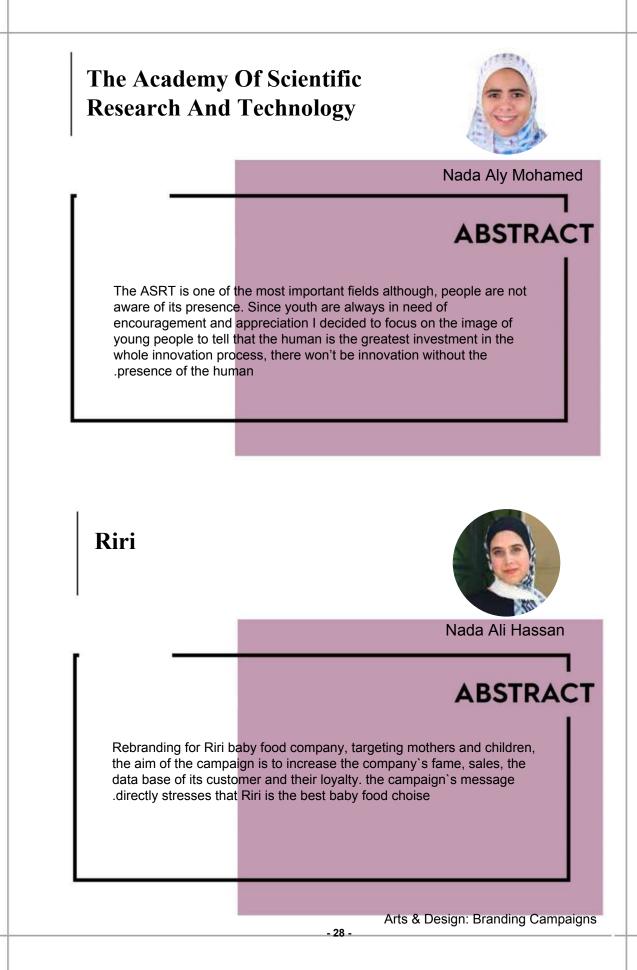
Arts & Design: Branding Campaigns







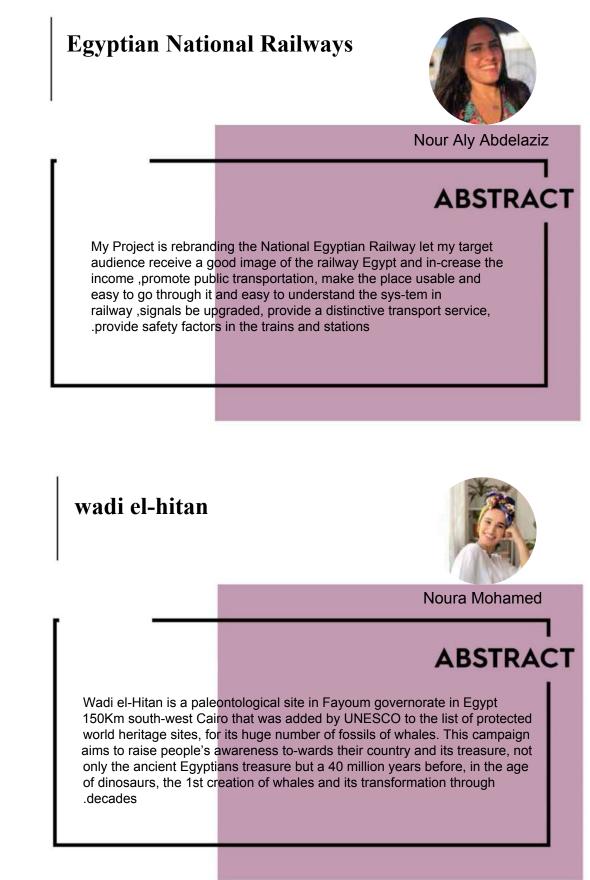


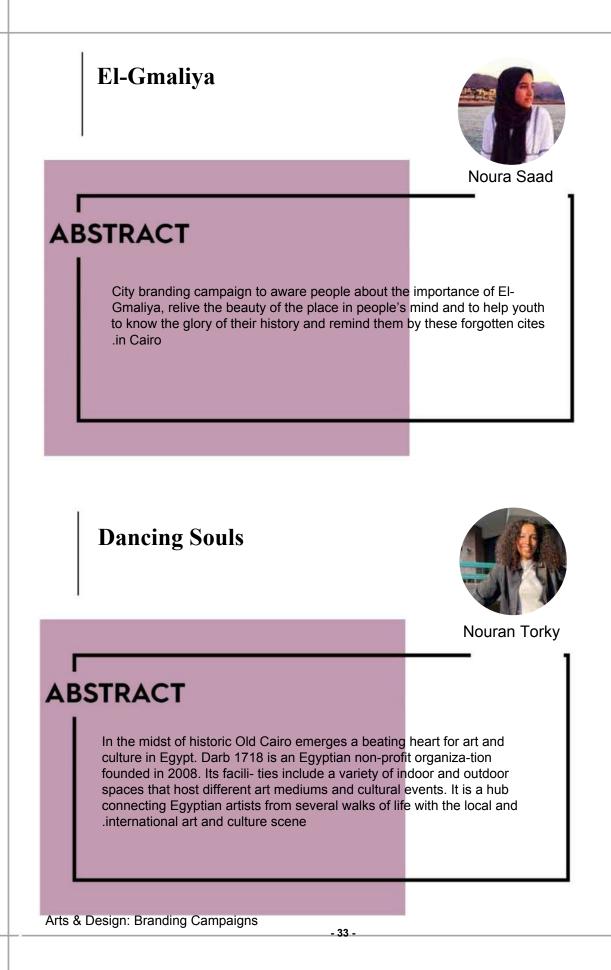


"Educate Me "Alemni	
	Nada Said
ABSTRACT	
An Egyptian Non- profitable organization called (Ed Alemni") icensed by ministry of education. It is a ow facilities that serves out of school children through .model with a focus on whole child development	ned charitable school"
Giza Zoo	
Giza Zoo	Nadeen Alaa Mahsoub
ABSTRACT	
	place as it was ore about the zoo

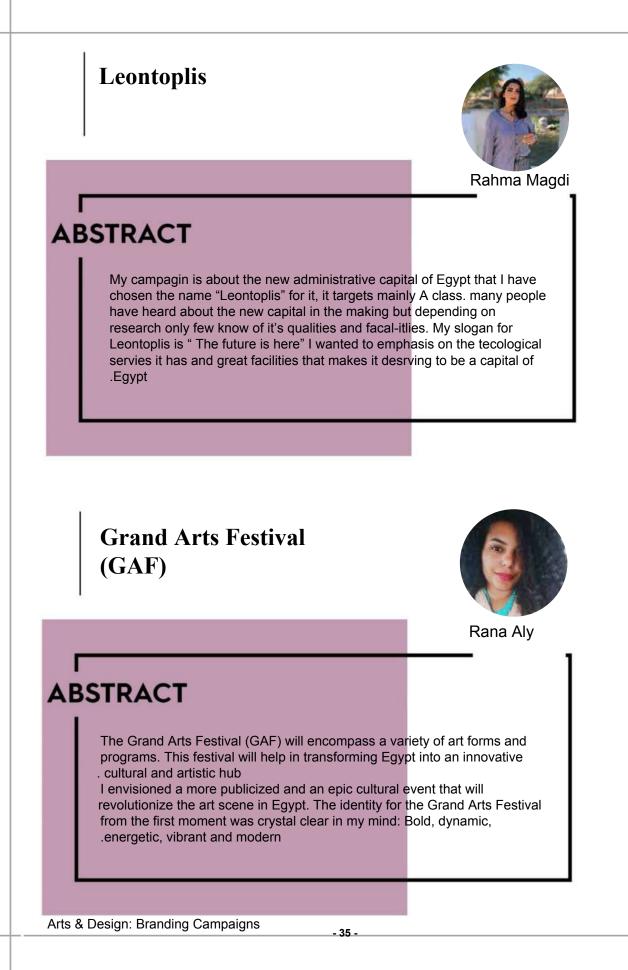


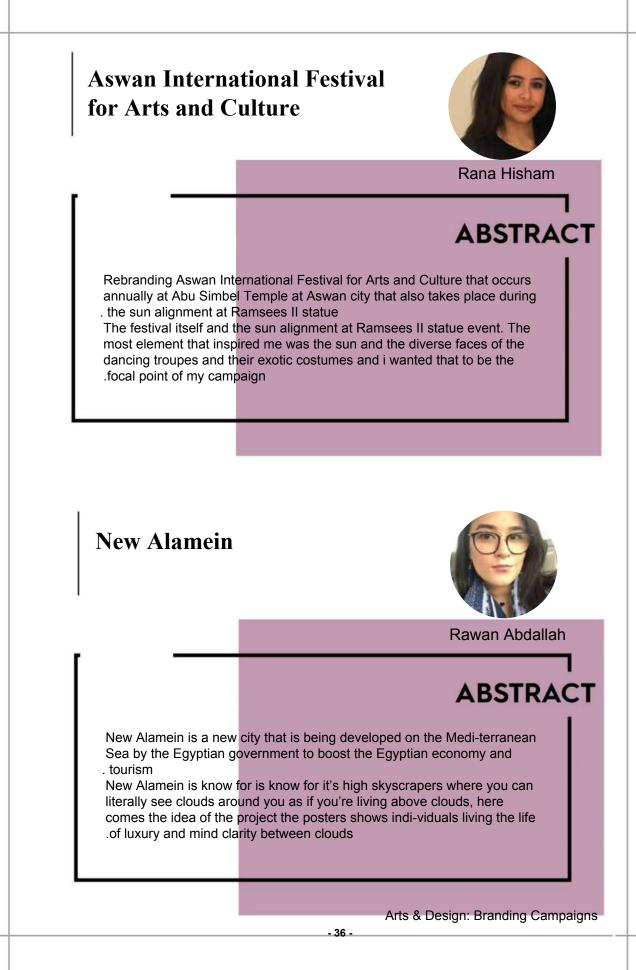


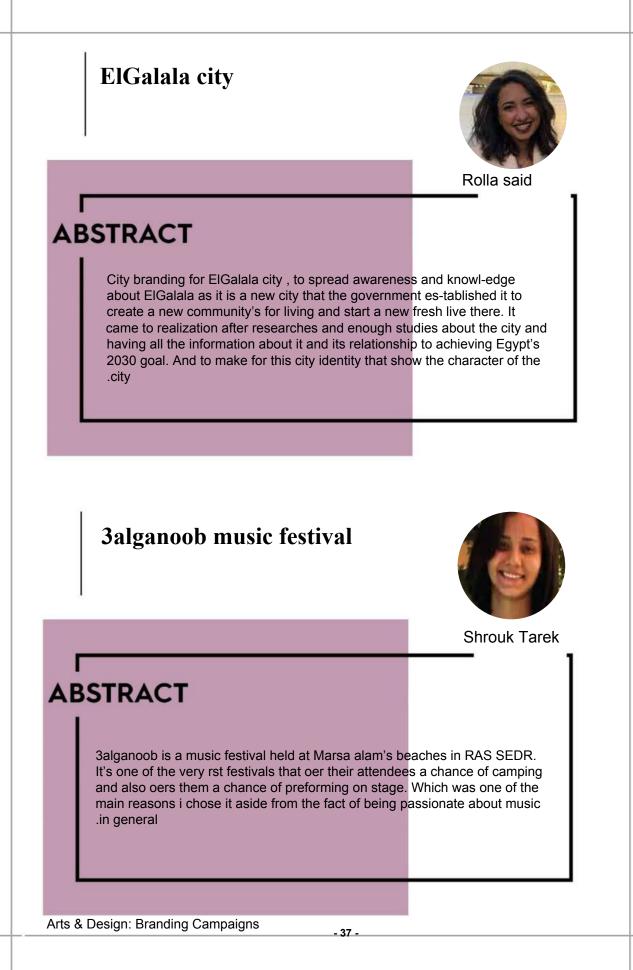


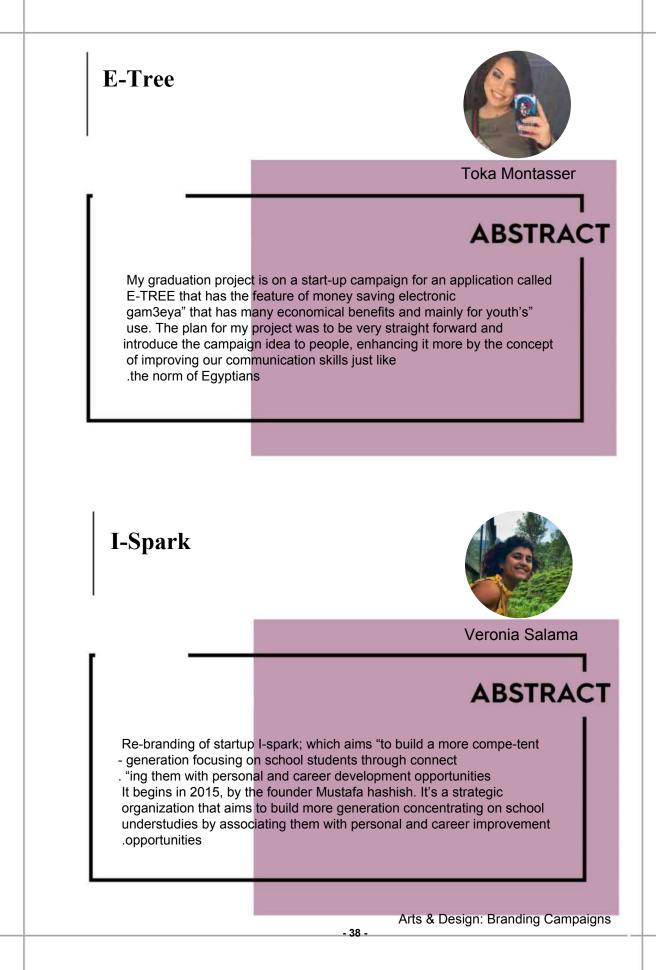


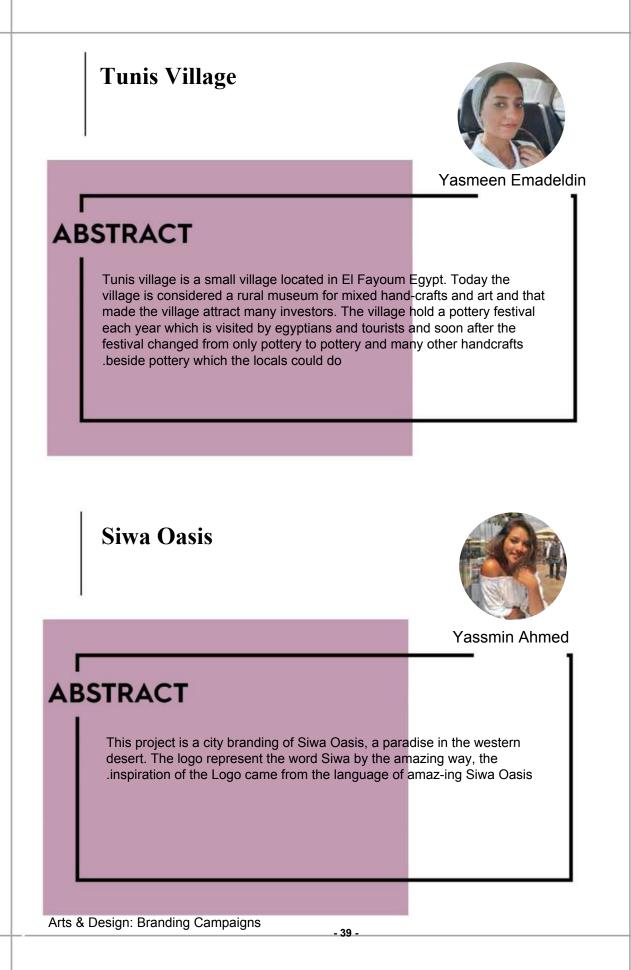


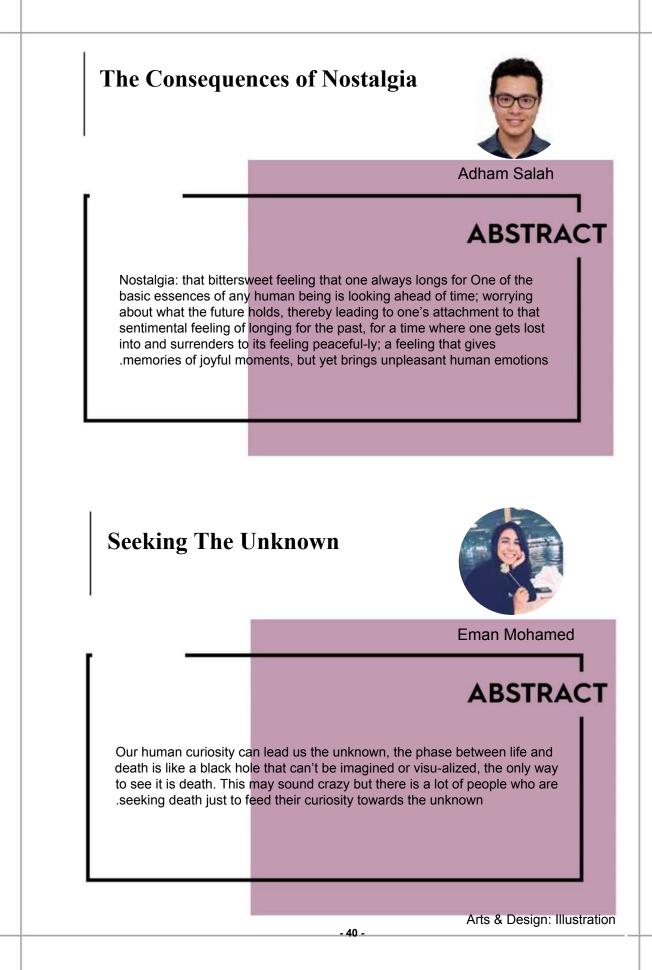


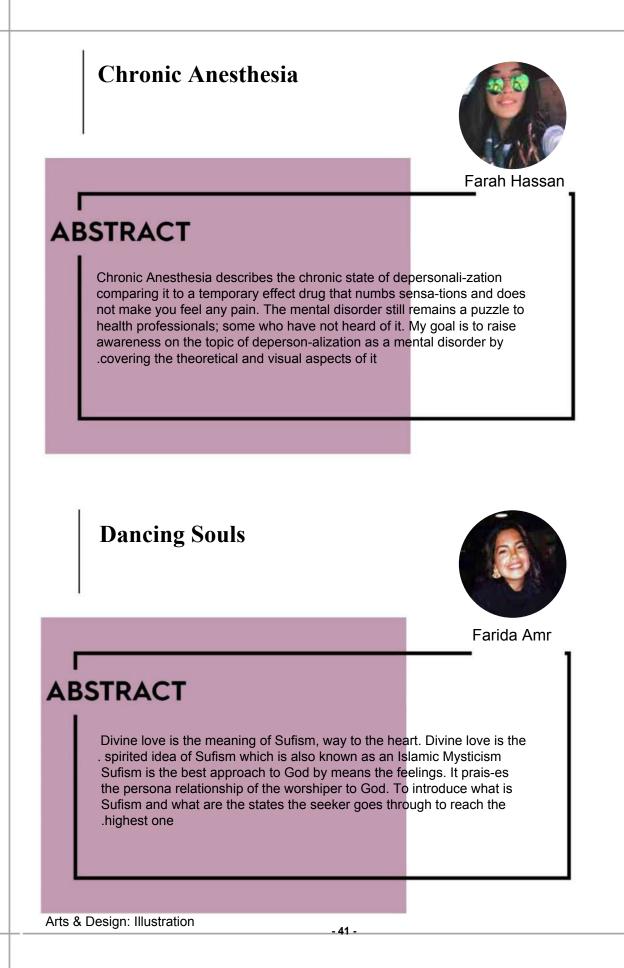


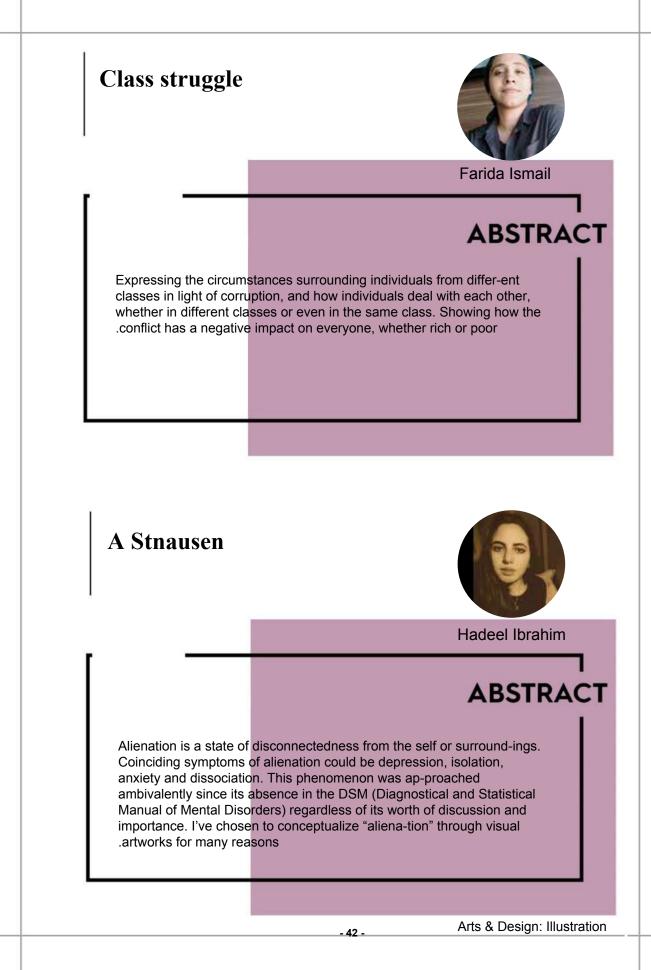


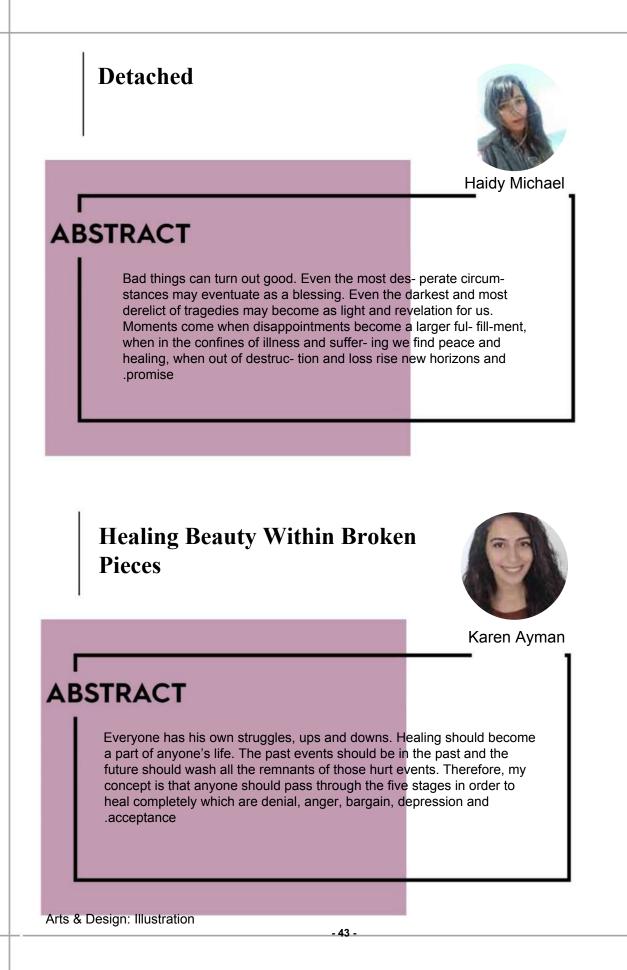


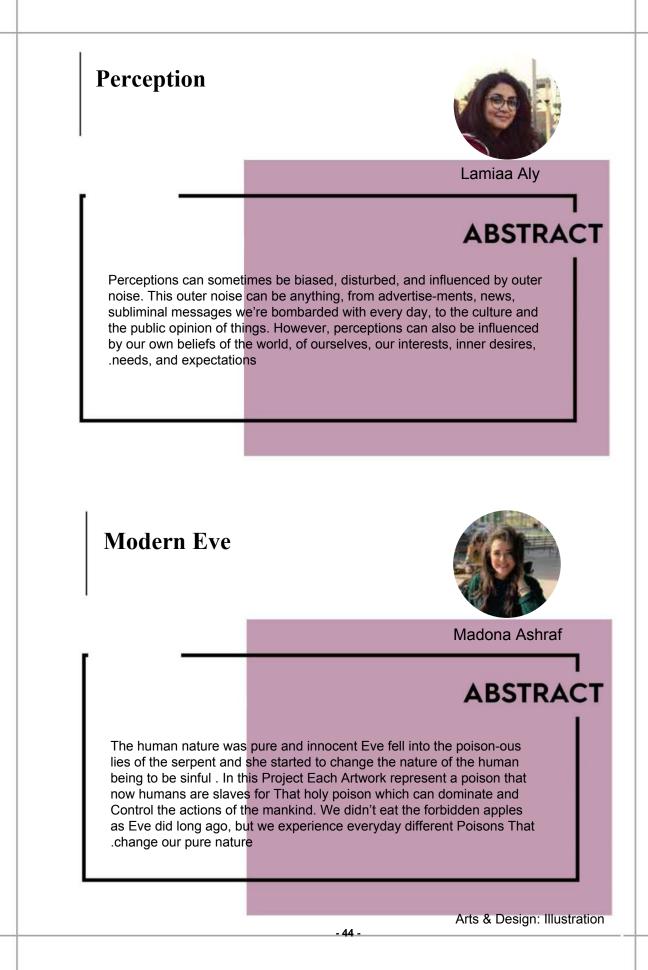






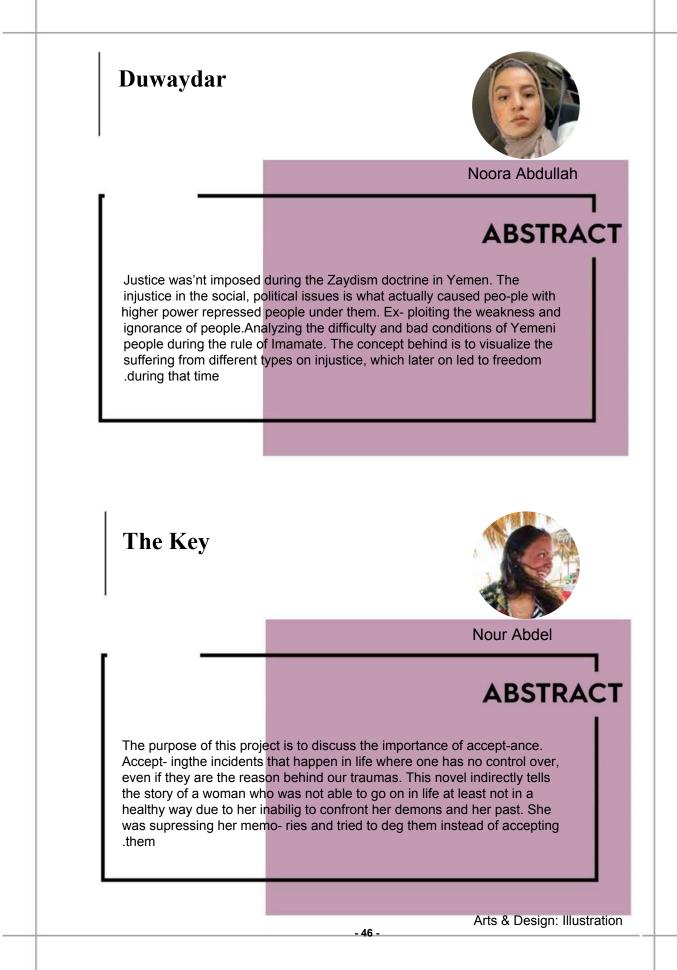


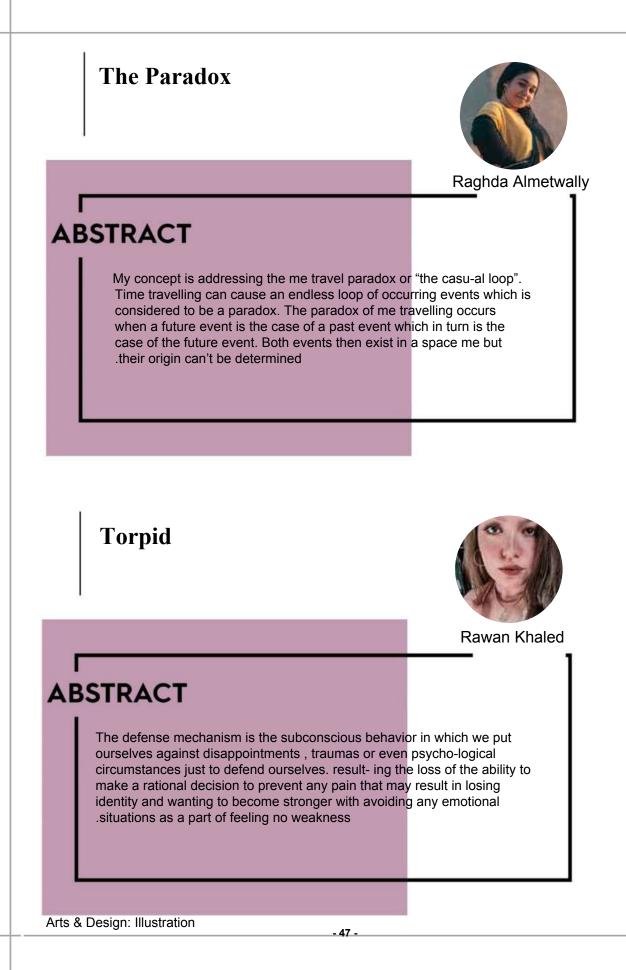


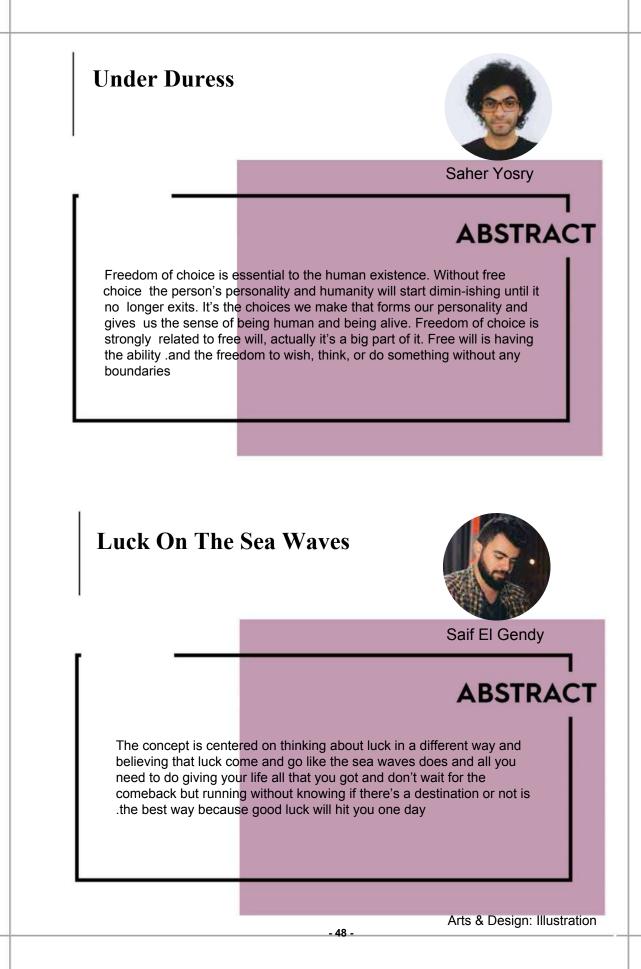


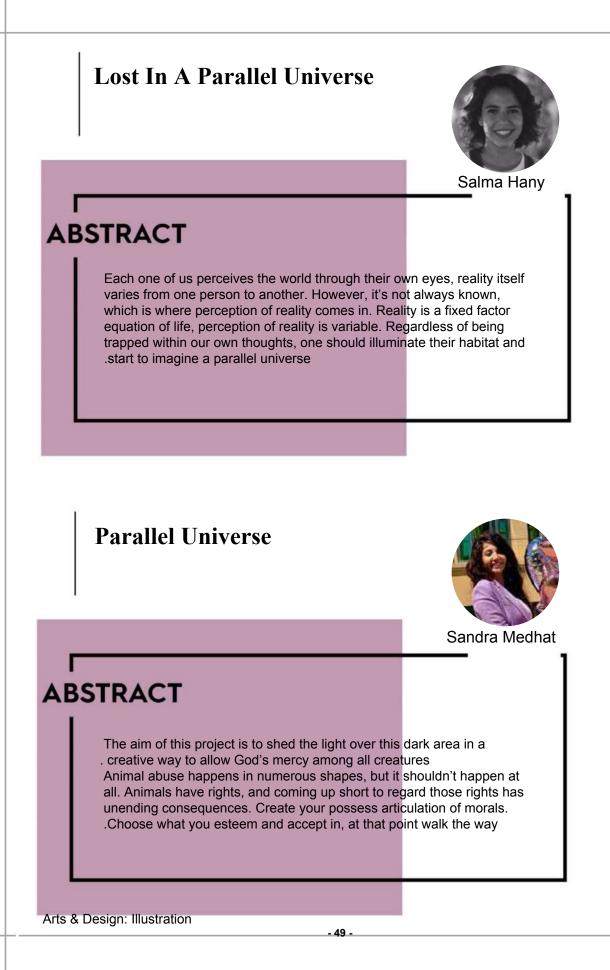


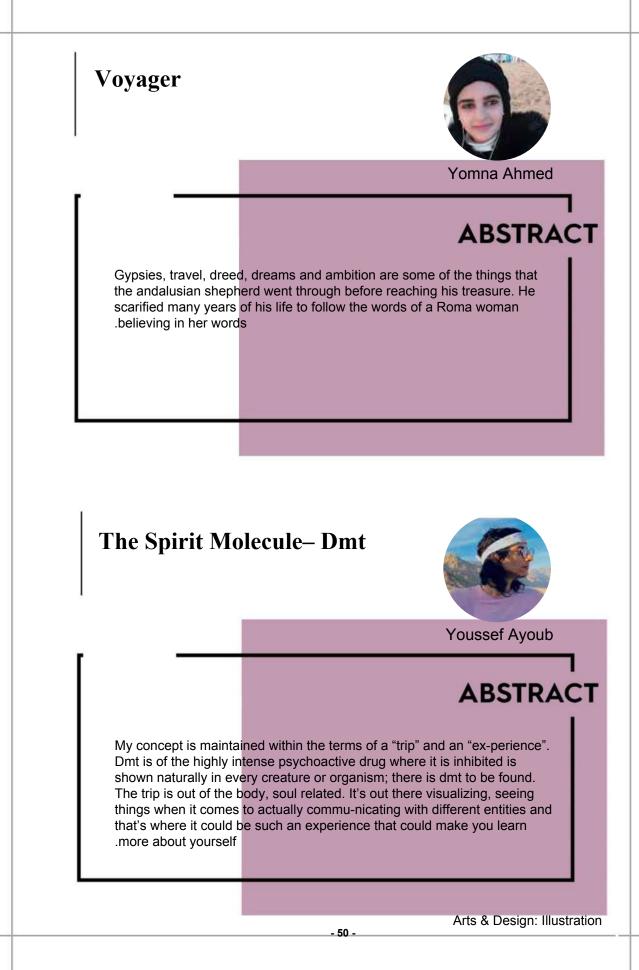
Arts & Design: Illustration

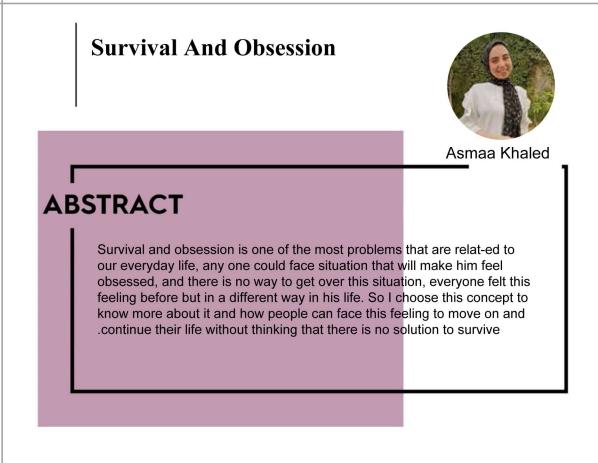


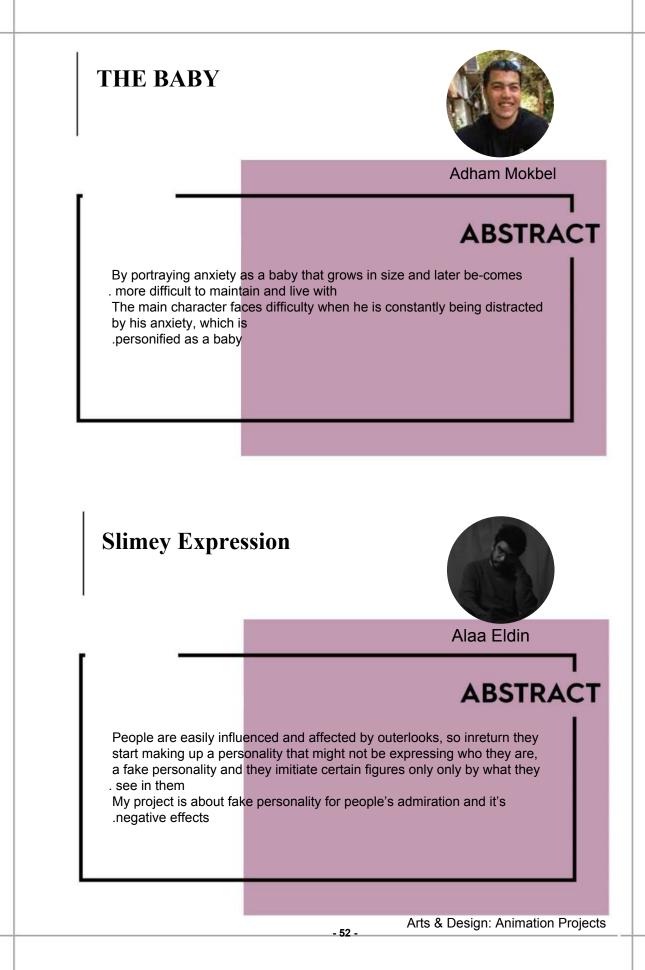


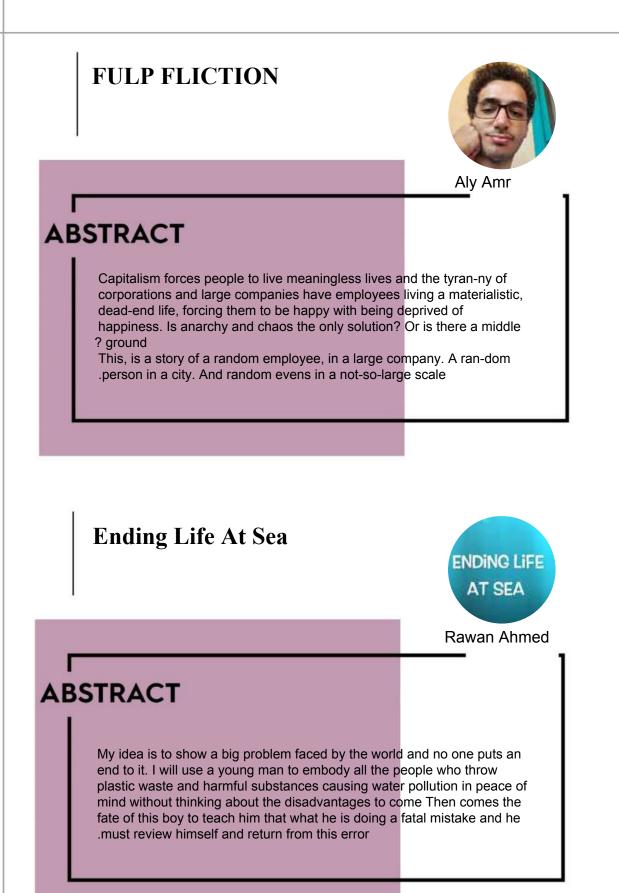


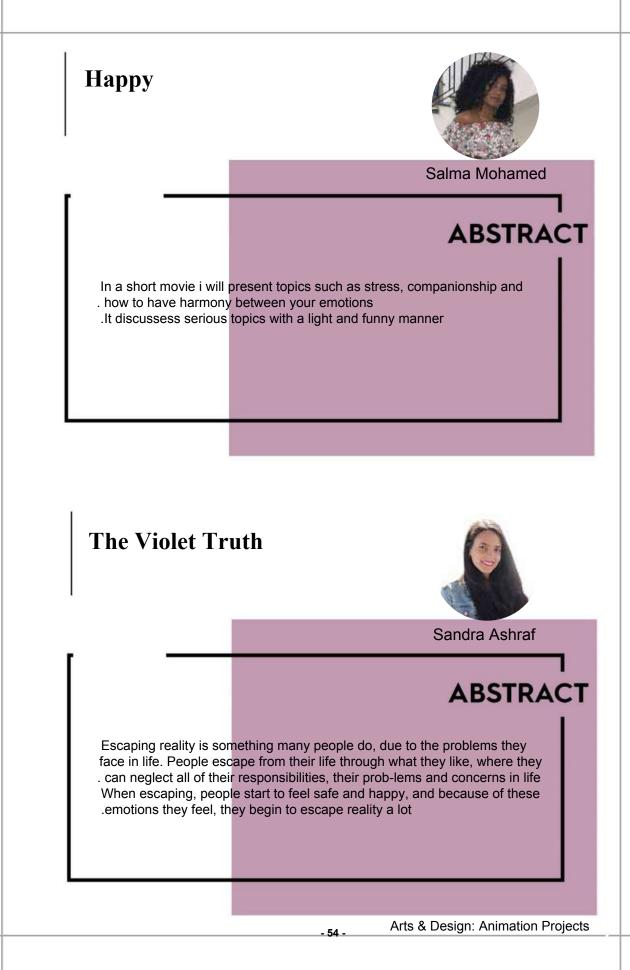


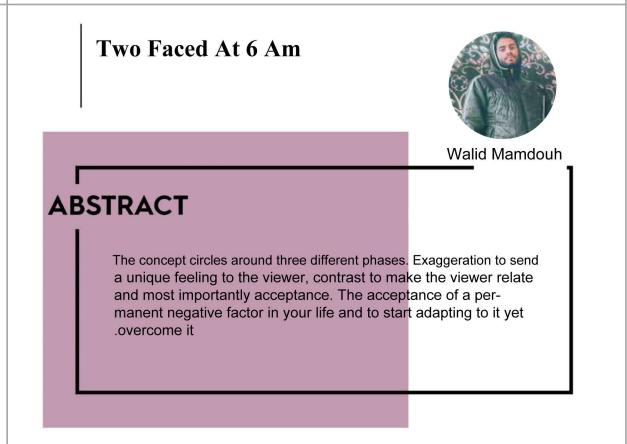












#### **Responsible Consumption And Production**



Rawan Ashraf





outdoor

## ABSTRACT

#### The Egyptian 3R's Environmental Interpretation Centre

This project is about Formulating a center with an atmospheric that helps people to acknowledge a new experience about 3R's life-style methods. That is vestige on energy savings, human's mental and physical health, and environmental pollution. To keep interior designers Up-to-date to the new techniques of Eco-friendly and recycled .materials, with its variety of usage



Exhibition



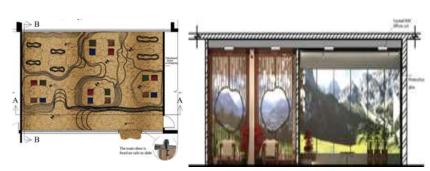
Cafeteria

Arts & Design: Interior Design

#### **Sustainable Cities And Communities**



Nada Mohamed



**Treatment room Section** 

## ABSTRACT

#### Allure of the Desert Cultural Center

The project consists primarily of a hydroponic farm that produces 100% organic products without using soil nor fertilizers. The edible products are then served in the restaurant, while the herbal products are used for making therapeutic and aromatic oils that are used in the therapy center. The project also includes an installation art gallery, several related workshops and outlets for the featured products. The design concept is based upon the spiritual meaning of mountains on that basis the location was chosen.



Arts & Design: Interior Design

### Life On Land



Sara Wael





outdoor

## ABSTRACT

#### AKASHA Bio-Cultural Hub in Dahab Island

In Egypt's tomorrow, there will be a need for sustainability in design without losing our roots. Since bio-culture is the essence of our roots, (AKASHA) is state of the art in technology to introduce a bio-cultural hub with ecological interior design to link Egypt's past with its future. It is designed to raise awareness and reuse waste through futuristic .approaches and implements human centric interi-or design



Cave room

Tree room

Arts & Design: Interior Design

#### Azola Community centre for elderly and children



Ayat Mohamed

# ABSTRACT

The Azola Community Centre in Uptown Cairo is designed to create an environment in which different societies can thrive, to de-velop social activities especially among the elderly and children. In order to maintain the separation from the outside world, we chose warm, natural and simple materials, and we preserved the pure texture and touch. In the design process, we .have strived to avoid excessive expression form

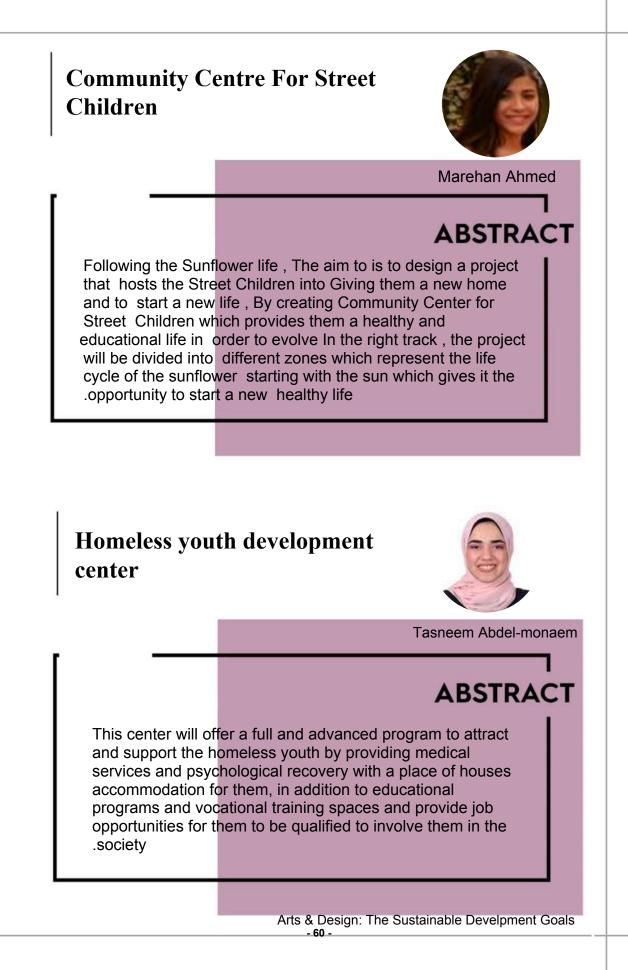
#### Rehabilitation Centre for The Recovered Drug Addicts



Hanin Ahmed

# ABSTRACT

The recovered drug addicts need help to integrate into society after the treatment process so the Rehabilitation centre is designed to set the eyes on nature which is a good way to help in emotional regulation and improves psychological well-being and make them heal from anger, .fear, stress and increases pleasant feelings



#### The Integration Between Interior Design And Neu-roscience In Wellness spaces



Lila Mohamed

# ABSTRACT

It is a place that makes users improve their social, emotional and physical health. A stress-free place where they can find comfort, health, happiness & alacrity. As users will feel connected to the place by neuroscience principles. It involves sensations such as seeing but also perception. Evaluation, decision making, emotions .and affect as well as interaction and movement

### **Co-working Spaces in Downtown**



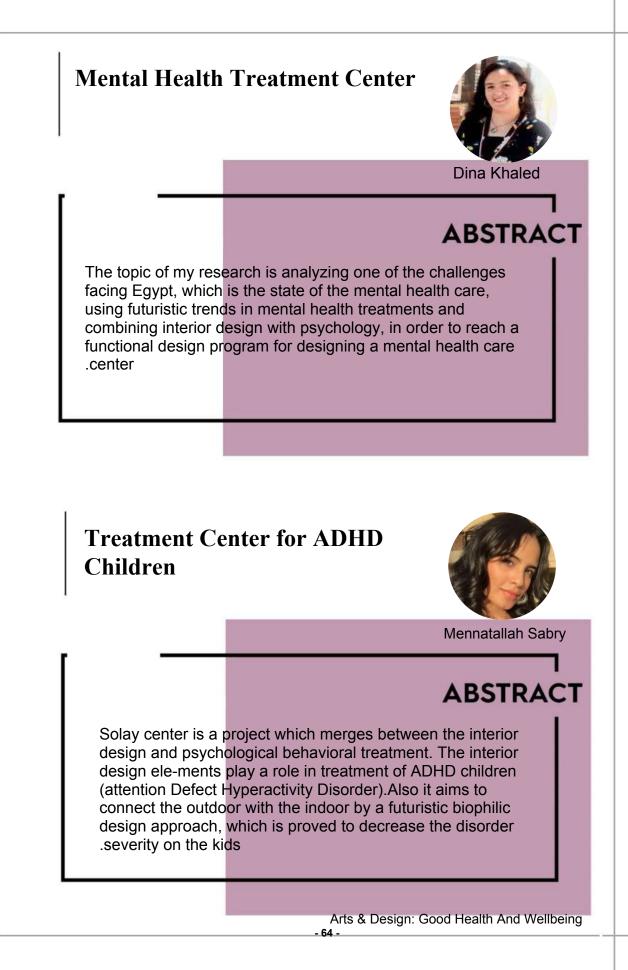
Farah Hassan

## ABSTRACT

offering a third place that combines both home and work feeling to achieve the optimum results expected of employees through the use of Biophilic design and its elements of: Color, Materials, and the sense of belonging. Specially to keep up with the future vision of Egypt 2030 and all the government plans for Downtown Cai-ro, the heart of our beautiful country. This project is a co-working Space located in Downtown, .Cairo







#### Zen Well-Being and Nutrition Center



Esraa Alaa-Eldeen

# ABSTRACT

It is located in Galala Mountain "Ain Al-Sokhna". This place helps to calm the mind and feel of relaxation and balance for those who have a routine life and feel the psychological pressure. This place

is perfect to spend a day use.... The main concept of the center is

Earth Art (Stones Art), using material that is made from that environment for that environment. The value of meditation and intuition, and realizing nature can significantly reduce stress levels

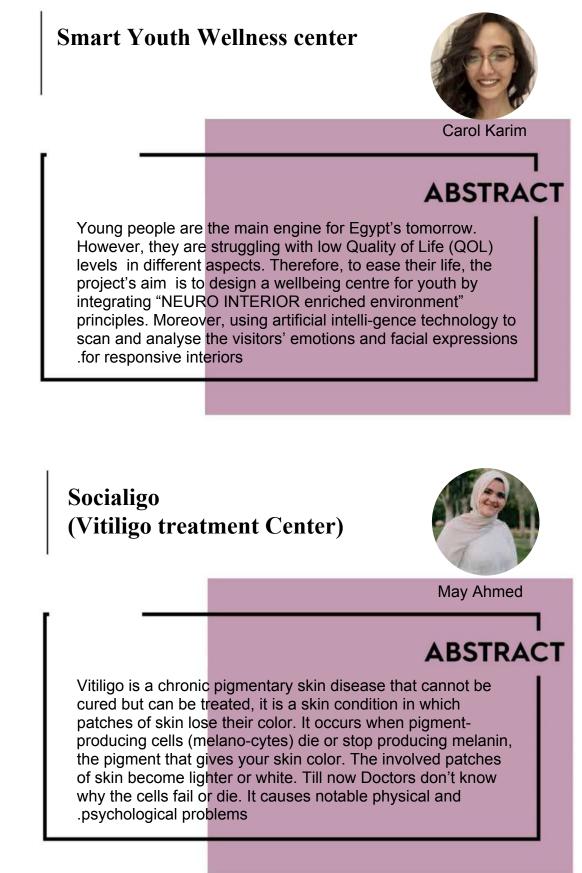
### **TORATHA Handicrafts Reviving Centre**



Omar Abdullah

# ABSTRACT

Reviving traditional handicrafts and activities at Egypt is more im-portant for us to raise our country. Using site location chosen as an identity to raise the property values, and community feelings and behavior. Sharing and gaining experiences in different fields and activities, and provides people to share their ideas and experienc-es in Community center



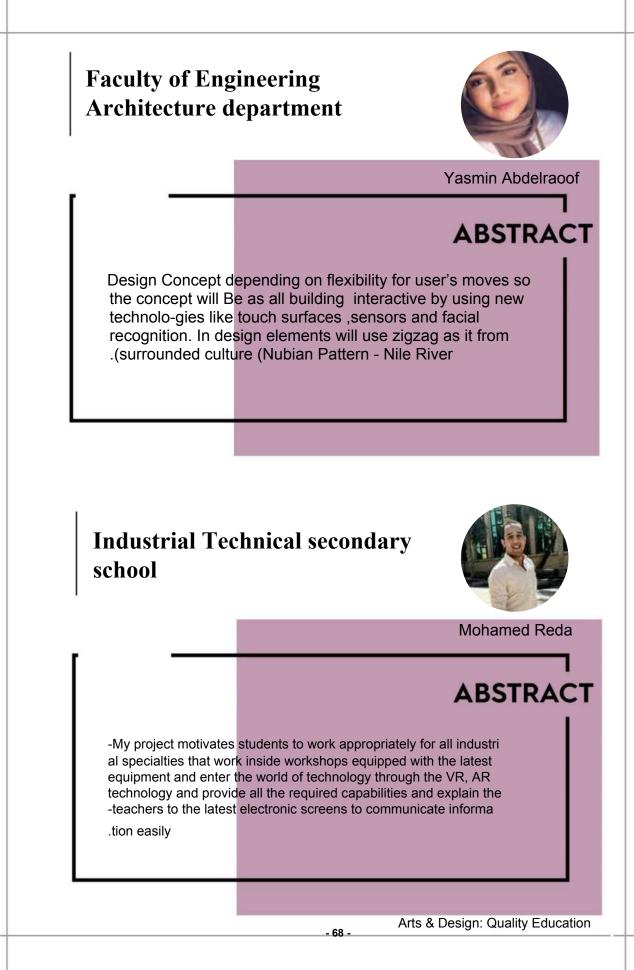
#### Armadillo prison in Egypt



Nada Osama

# ABSTRACT

Conditions in prisons are hard and life threatening due to overcrowding, health and safety risk, and absence of good ventilation. Also, prisons lack humanity, which is rife with different abuses such as sexual and physical abuses. Therefore, this project aims to for-mulate a design programme to design a criteria creating a human-ity prison that helps prisoners after serving their penalty to blend with society, .improving the interior environment for its users



#### Vocational Technical school, Cairo



Shahinda Roshdy

# ABSTRACT

In the near future, vocational training will flourish in Egypt as a way to cover market needs and restore the economy. It is important that the youth get exposed to new technologies within their technical career. As schools prepare for new technologies, interior design comes in to make space for the future and tackle the social stigma within social classes to make such schools .more attractive and more prepared for the future

#### UNIVERSITY HOSTEL FOR MSA



Shorouk Mohamed

# ABSTRACT

A lot of students join universities away from their homes and cities. The interior designers start to think how to solve this problem from their majors. They start to think about how to use sustainable mate-rials and colors in their interior ...designs

Arts & Design: Quality Education

#### **Study Hub for Youth In October City**



Reem Hassan

# ABSTRACT

This project aims to enhance the productivity of students through the study HUB, by linking between Technology and informal learn-ing through the integration of interior design and neuroscience, and as the technology is key Instrument in informal learning, and to reach the optimum conclusion to affect the productivity and the use of neuroscience to affect students behavior and mood, as the enriched environment can .lead to brain cell growth

#### **Industrial Vocational school**



Mohamed yehya

# ABSTRACT

Vocational school has three department architecture, mechani-cal and electronic, I used industrial interior design to shape three zones gallery ,classroom, workshops where we can combine between industry and learning in one environment by using interior industrial style with a technological way creating industrial learning environment to help .students to achieve maximum comfort



#### **Goldenwave Research Center for extracting energy from sea waves**



Shrouq Hesham

# ABSTRACT

Project takes the approach of redesign the interior of Research Centre beside observatory, is an extension to water desalination station near from the sea. While desalination, the observatory ex-ploits the energy of hydraulic waves to generate energy. The con-cept is to use neuroscience in design in both ways to help workers be energetic and also to help workers to .calm down in break

#### Impact of Design Trends in Developing Interior Spac es in -Water Research Centre



Amany Yousry

# ABSTRACT

Reaching to interior design guidelines that improve the performance of water research centers. Introduce different intelligent technology and design trends that can impact the performance of water research centers and explore the optimal performance. Enhance the ways that makes the water research centers impact positively on the environment and reduce the counter .resources

#### Learning Disability Simulation Centre in Egypt



Esraa Samir

# ABSTRACT

This project will provide the teacher training center on how to deal with children with learning disabilities and put teachers in situations similar to children with learning disabilities to feel their suffering by using more technology in the center to connect the teacher to the correct way t deal with learning dailies. Providing places and work-shops to parents and .students

# Bioenergy research institutes in Egypt



Mohamed Ehab

# ABSTRACT

There's an absence of bioenergy research institutes in Egypt and with the more consumption of energy and CO2 the more negative impacts will affect the environment. Algae is a natural source of bioenergy which can be found in Nile rivers and seas in Egypt, by taking advantage of algae will have a great impact on Egypt's envi-ronment. Algae façade also will have positive health impact in the interior design through the . inhale and exhale of CO2 and O2

# Pavilions land in the new administrative capital



Yassmin Ossama

# ABSTRACT

The project focuses on how interior design will allow people mainly investor's travel through cities of Egypt representing its resources, covering three main regions. Upper part of Egypt Delta, western part Siwa "and finally southern part Luxor and Aswan. Presented through pavilions structured zones that merge the past and pres-ent of each region with futuristic . technologies that still keeping the identity of each region

#### **Gezerat Alwarraq Commercial Fishery Market Complex**



Karim Mahmoud

# ABSTRACT

Freshwater fisheries and aquaculture can play an important role all of the world in providing food supplies and improving the economic and social conditions of rural populations by creating employment opportunities, reducing migration and fighting hunger.. Gezerat AlWarrak will need this project to build a future integrated fish mar-ket which will not only include the commercial zones but also will represent a new philosophy for .markets

Arts & Design: Decent Work And Economic Growth

#### Egyptian Construction Labor Force Stock Market



Ahmed Zaki

# ABSTRACT

Egypt suffered from several problems of untrained and unorgan-ized workers. In this project in the New Capital of Egypt, A stock market was created for workers based on solving all their prob-lems, training them, and determining their price after training. The center is formed in a gear shape which means power. By Studying the interior design aspects well and .how they affect workers and employees



Centre



Ali Nasser

## ABSTRACT

The idea here is to think about these handicrafts and to protect them from extinction, and enhance cultural and creative indus-tries. As well as improving and developing the industrial situation of Egypt locally and globally by marketing for handicrafts products in a contemporary way and display it with new technologies that attract visitors to the Centre. By .the Renovation of Khan Al-Azizia

Arts & Design: Industry, Innovation And Infrastructure







Noura Mohamed

# ABSTRACT

Glass is one of the things that when need to recycle and employ it in Egypt, use it in a different way and need to be sustainable. Sirs Al layyanah need that project to be attraction point. Inside that place there is a museum talk about the glass history, gallery show the unique pieces of glass, and .attraction lobby have artistic pieces of glass

#### **Renovation of music library at Cairo opera house**



Rola Emad

# ABSTRACT

The purpose of this project is to merge between the Egyptian culture and the arts heritage to attract new generations especial-ly youth in Egypt by choosing it as an advanced way to increase awareness and promote the beauty, remarkability and significance of the library, as they are often not taught the value of libraries thus do not recognize the importance and .history of books and music

#### **Creative Zone Co-Working Space**



Yara Mohamed

# ABSTRACT

Creative Zone is an innovation co-working space that supports interdisciplinary discussion and entrepreneurship. Studying how interior design supports innovation and creativity with a happiness approach. Using Biophilic design and technology as opportunities to help employees in increasing their creativity, innovation and sat-isfaction that will .help in increasing Egypt's productivity and raise its economy

#### El Hegaza Handcraft Center



Hassan Alana

# ABSTRACT

Crafts as such are a source of tradition passed on from one generation to the other. It is our duty to continue this generation of craft, a skill that needs to be preserved and promoted. El Hegaza Handcraft Center aims to achieve this by carrying on the culture of .craft and inspiring people to be indigenous

# Medical Tainment Graduation<br/>ProjectImage: Constraint of the second seco

#### Art Gallery with Artist residency (Waklet El Ghouri)

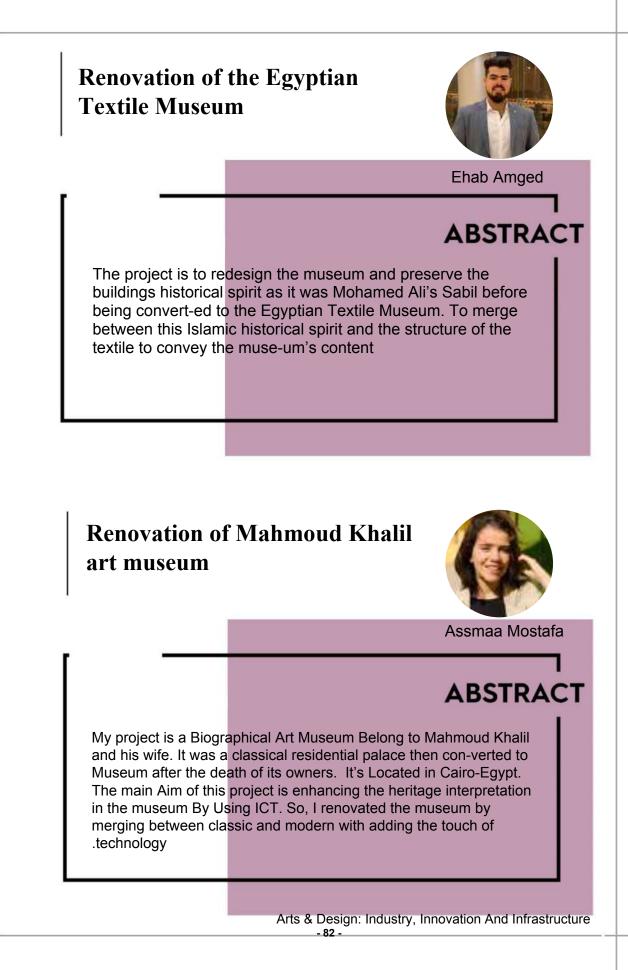


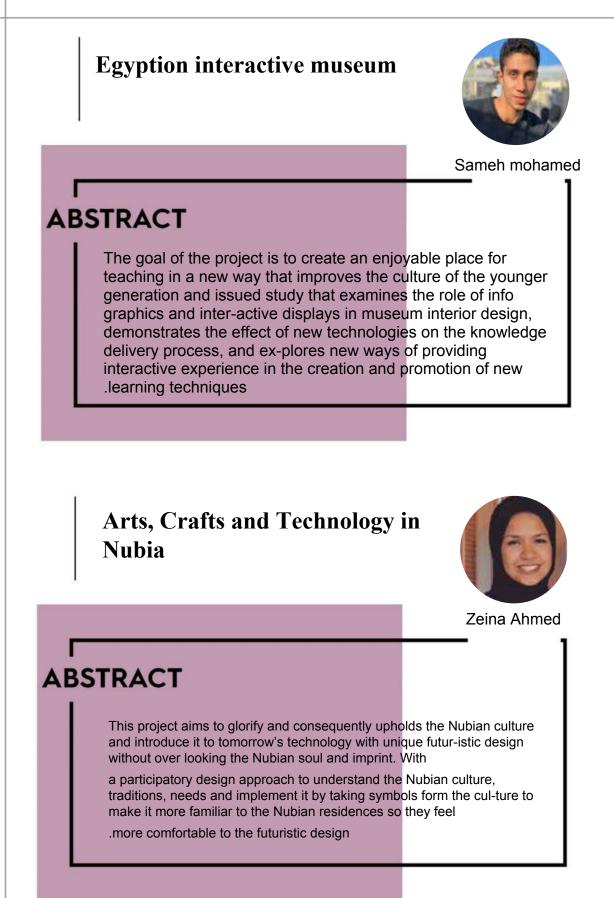
Mariam Abd El Baset

# ABSTRACT

The idea is connecting our Islamic identity with contemporary and futuristic approaches, as to deliver a message that Islamic art has the ability to merge with any era. so the idea behind design is to combine methods of modern design with the old building and mix between the old materials in the building, modern materials and the use of lights to highlight the beauty of the building and stone

Arts & Design: Industry, Innovation And Infrastructure





Arts & Design: Industry, Innovation And Infrastructure

#### Cultural center (In new administrative of Egypt)



**Bassant Ahmed** 

# ABSTRACT

This Project will attract children and adults to go the cultural center. It depends on a design program to upgrade the Cultural Centre into a place that helps the adults to feed their minds with knowledge. The building will take place in the new administrative capital of Egypt. It includes a library zone, restaurant, reception, Book club, dining, arts& historical room, .café, and music zone

# Ezbet community center in EZBET ABU QARN



Mariam Mohammed

# ABSTRACT

The project is to design an interior design for the Ezbet Community Center which has been designed exteriorly in the Ezbet Project academy. the project focuses on empowering the slum people by generating their financial gain through recycling, reusing materi-als, and learning how recycled materials can be applied in interior design in local places towards achieving ecofriendly and environ-mental health and using pigeon loft design

#### **Redesigning Alexandria Railway** station



Sara Mohamed

# ABSTRACT

That has the roman style but it neglected so forming a design program by mixing the modern design with the heritage building by parametric design as a form of generation to enhance the interior design of Alexandria Railway Station by using the futuristic trends to create a new iconic landmark that will function as a key catalyst for the on-going regeneration of Alexandria by adding services inside the station to be an intermodal Station in the future

#### **Giza Train station**



Sara Soliman

# ABSTRACT

My project is to renovate and modernize the Giza train station in order to make it fit the future and its technologies while maintaining the main services for citizens and maintaining the general pharaon-ic model of the station. As it is certified as an historical building. The general atmosphere of the place will fall under the mixture between the old and the new in terms of interior design to make it go hand in hand with the exterior .design



Amira Khaled

### ABSTRACT

The research presents the challenge of the over population that Egypt is facing in the recent times, which increase in recent years with greatly affect the means of transport, which can be solved by using industrial opportunity in the new monorail stations. to allow the station accommodate the largest number of users daily and project will take the approach of making the interior design to mon-orail station more comfortable and .suitable

Arts & Design: Sustainable Cities And Communities

#### **Eco-friendly Material lab for Construction Materials**



Noura Ahmed

# ABSTRACT

The project is an ecofriendly material lab and Research center with workshops for training the local workers of Elsalam city a craft which is turning the wastes into construction materials by the methods of the 3R concept and biophilic concept then display the raw materials and the prototypes of the construction materials in the exhibition to show the valuable things that can .come out from the wastes

#### El-Wahaat El-Baharya Dates Market



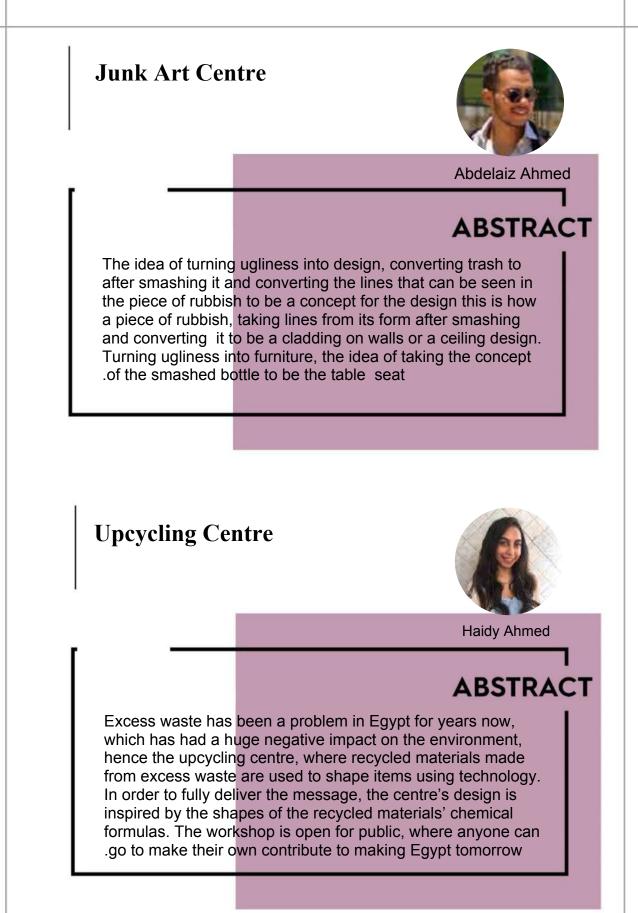
Poula Ezat

# ABSTRACT

Market for dates that sells all kinds of dates grown in this oasis, and there is also a market for selling handicraft products from palm trees and teaching people these crafts. There is also a restaurant in this market. The importance of this Project is that it will provide a good life for the establishment of projects for date products, using all palm products, natural materials and reuse of palm trees resources will make the market .rich with natural beauty

Arts & Desigg: Responsible Consumption And Production





Arts & Design: Responsible Consumption And Production

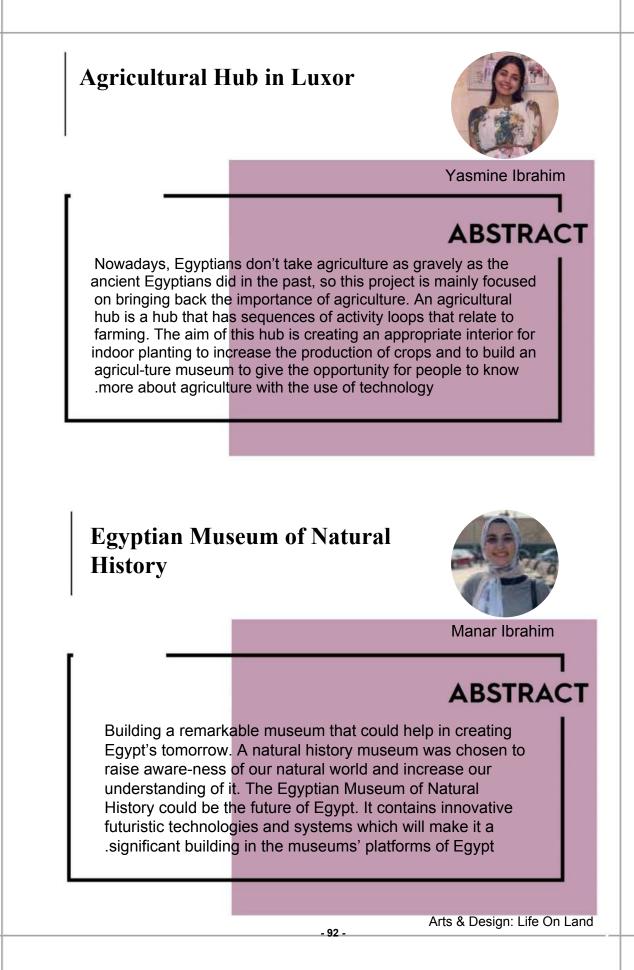
#### Safaga Green Holidays For Meditation and Spa



Mariem Emad

# ABSTRACT

No doubt that anti-pollution concept in meditation and spa building is very important and it will help in reducing the pollution in the environment and that will help in improving people's health and life through making meditation in clean environment. This concept will be suitable in Safaga city in Egypt as this area's climate is charac-terized by its pure dry air all the which proved that these factors are likely to be effective .in curing some diseases



#### Marine Research Centre in Ras-ElBar reserve



Salma Farag

# ABSTRACT

The Marine Life Centre rehabilitates and releases stranded marine mammals and sea turtles in order to advance science and educa-tion in marine health and conservation. The scientists and staff of the center believe in humane care for stranded marine animals, thoughtful science that improves our understanding of marine life health, and quality education .programs that promote a conserva-tion ethic

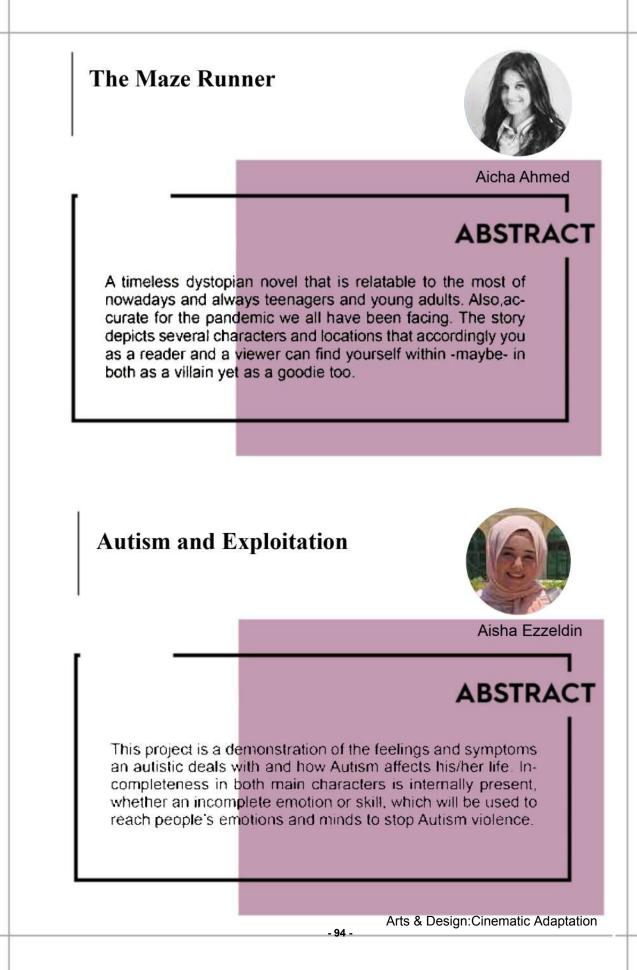
# Industrial Technical secondary school

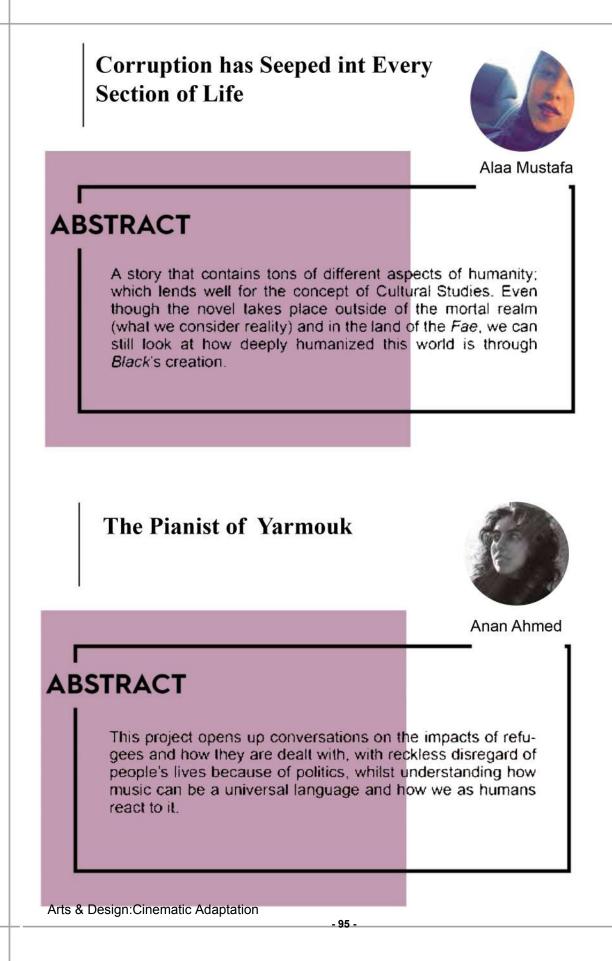


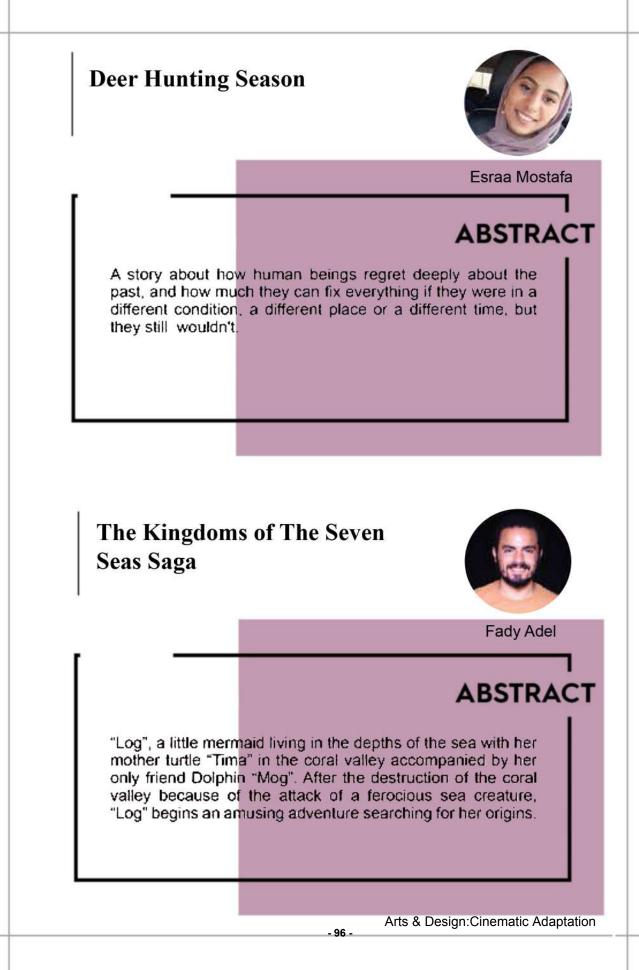
Sandra Salah

# ABSTRACT

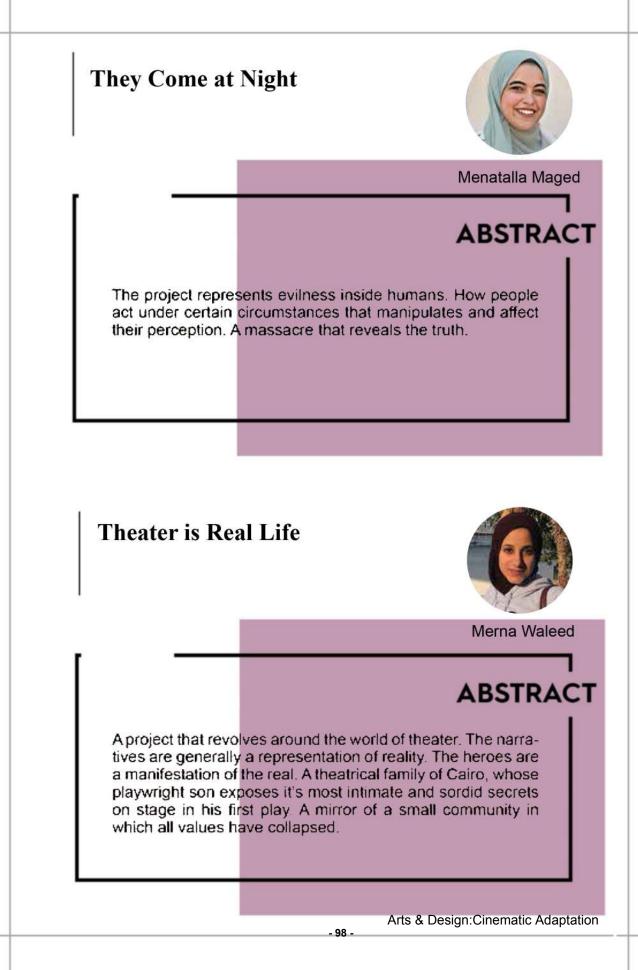
Aquarium museums have an economic role for its correlation with tourism; also it has a biological role in raising awareness of aquatic biodiversity. there are many challenged including biodiversity, wa-tering, energy challenges facing the society, and designers should found sustainable solution through technology that is suggested by biomimicry approach to provide all aquarium facilities entertain-ment and exhibition .within interior design consideration

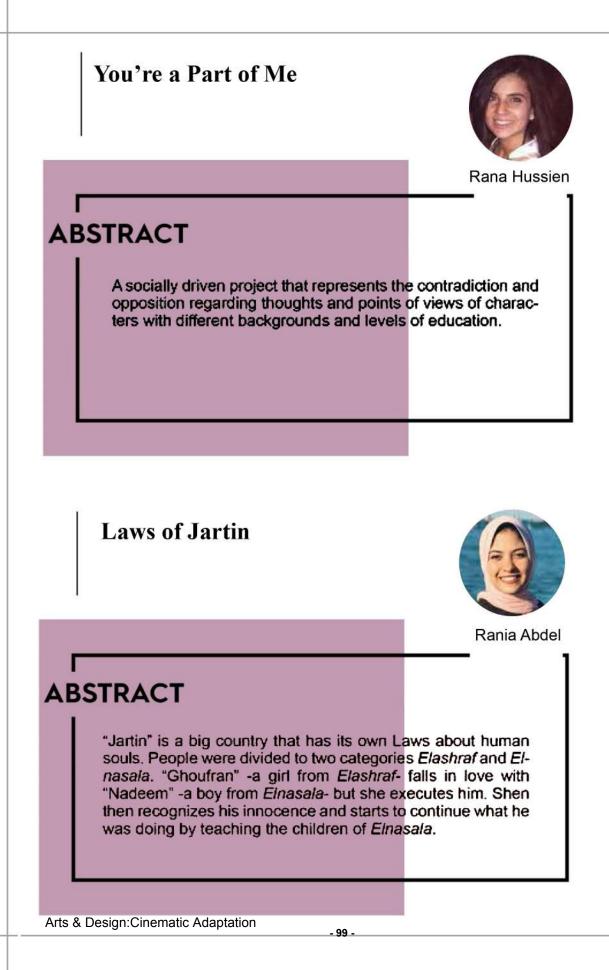








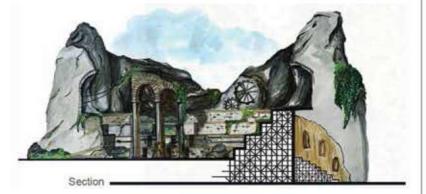




#### **Thieves of Time**



Salma Ahmed



#### ABSTRACT

Adapted from "MOMO" -a fantasy novel- about the concept of time and how it is used by humans in modern societies. "Momo" is a girl full of creativity, bravery and love, and has an important message about time and organizing your day for modern readers. "Time is life, and life exists in our hearts, and the more of it that the people saved, the less they actually had." This sentiment resonates strongly to our preset day.



Arts & Design:Cinematic Adaptation

#### Divergent



Roufyda Mohamed



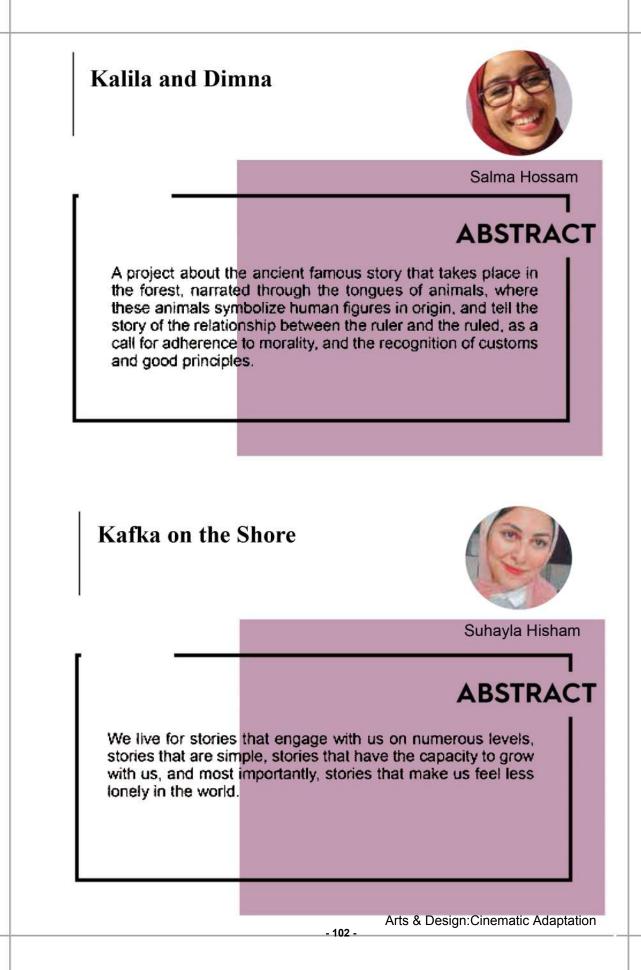


## ABSTRACT

A project taking place in dystopian Chicago in the future. Chosen to highlight the case of "The lack of humanity" to spread its importance, and to recharge the belief in the power of humans. Accordingly, the "Eyes under microscope" were chosen to represent the design concept.



Arts & Design: Cinematic Adaptation



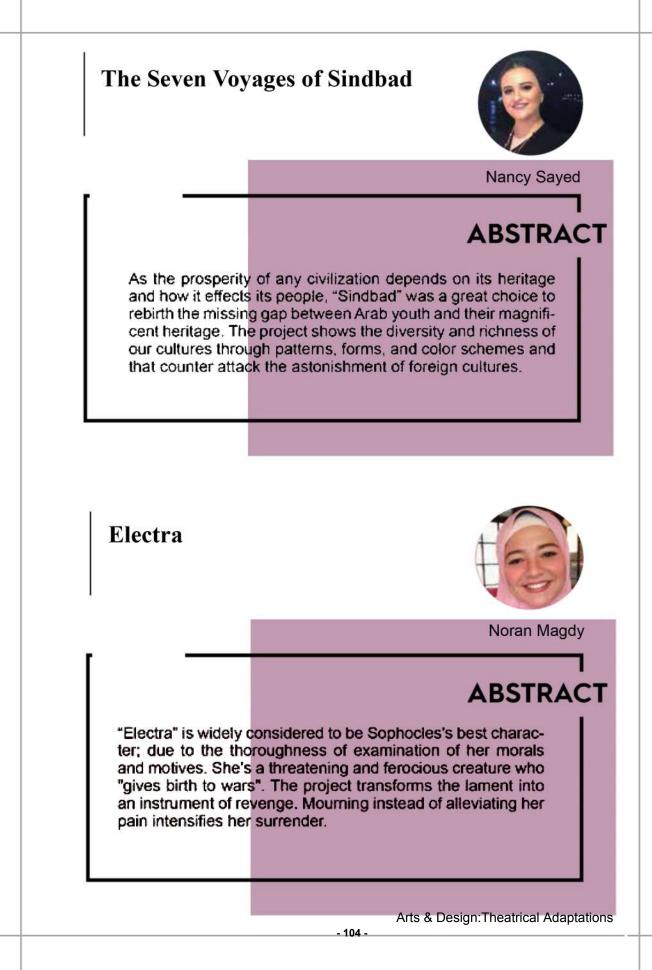
#### The Reaper



Zaher Ashraf

# ABSTRACT

A book, that enables its holder to govern the world, takes us on a journey through "Nawal" who lives in her grandfather's estate and gets lost in her fantasies and dreams for hundreds of years, only to discover that she was trapped in someone's memory. A project that highlights that "a small candle in a dark room could be your savoir, but could also be your own way to the darkness."



# Addiction is a Disease, not a Moral Deviation



Hadir Ehab

## ABSTRACT

In the siege of the drug phenomenon which emerged in the 80s and Heroin invaded Egypt, a group of five young people were curious and liked to investigate everything. The novel opens the eyes on different social, environmental, and psychological influences which affected their personality and were the main reasons for their addiction. A story about "Madness, jails, rehabilitations and death".

## Curiosity is a Disease that Kills its Owner



Huda Asim

## ABSTRACT

Adam started an experimental drug that allows him to control his hallucinations, then ignore them. Chapters take the form of a letter to his therapist. Adam's constant fear, and the projects main conflict, is what people think of mental illness and how they would react. The author takes us on a journey to see the first moments of the life after death in the after life.

Arts & Design: Theatrical Adaptations

## Lucifer's Cavity



Maiar Medhat



## ABSTRACT

A Project that takes place in the countryside of Egypt, where all the folklore myths and legends are widespread because of the ignorance and illiteracy. A windmill frightens all the villagers because of the scary myths the elders narrate about its dangers, ghosts, and many dead bodies.



Arts & Design: Puppetry Adaptations

## Vibrant Survival

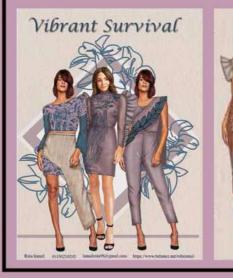


Rola Mohamed



## ABSTRACT

This project have been done for creating a ready to wear collection for the breast cancer's survivors to be comfortable and trendy. As all breast cancer's patients and survivors have a common issue in their clothes while moving their arm, and in the unbalanced outer shape of the breast. This project will help the survivors or patients to find suitable clothes for their comfort.





Arts & Design:Fashion Design

## Rebirth

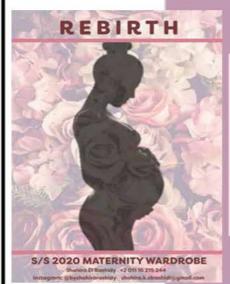


Shahira Khaled



## ABSTRACT

This project aimed at creating a trendy practical ready-to-wear collection for maternity. Inspired by close up photography of flowers, these sources of inspiration assisted in defining: cut lines, colors (pastel colors) and prints of the collection.





Arts & Design:Fashion Design

## **All Purpose**



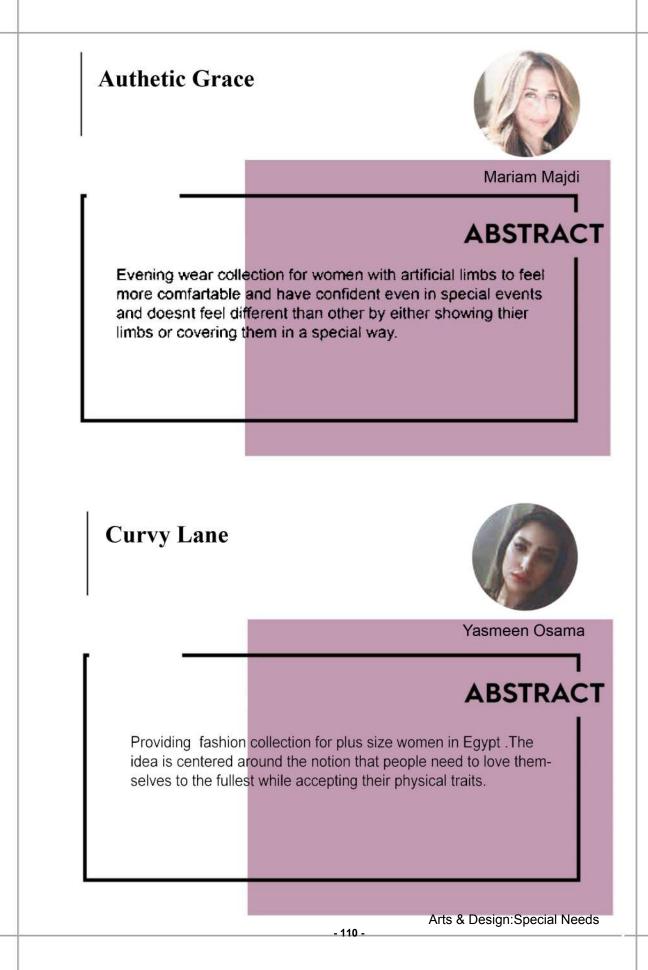
Yara Mostafa

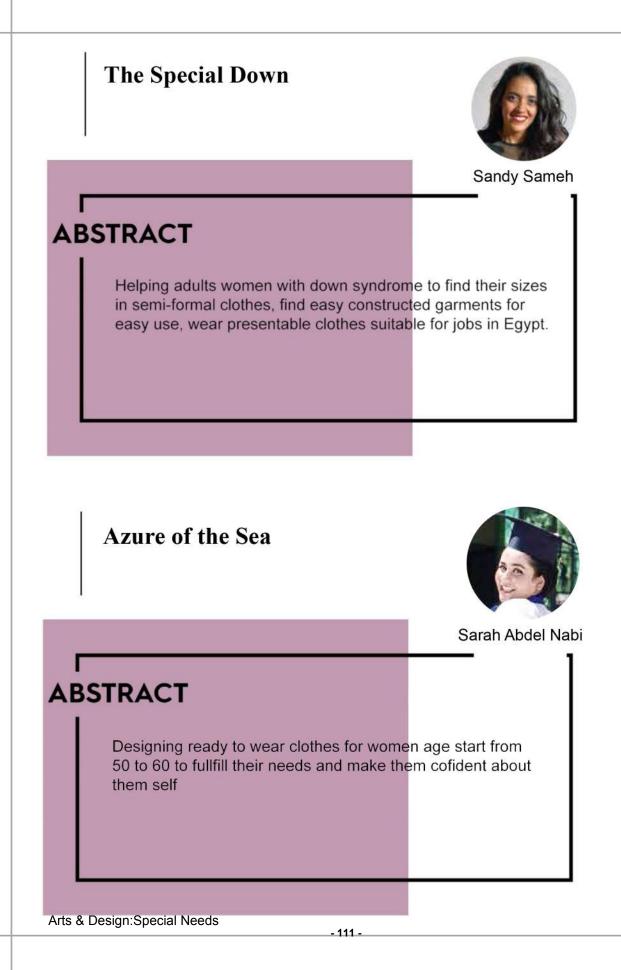


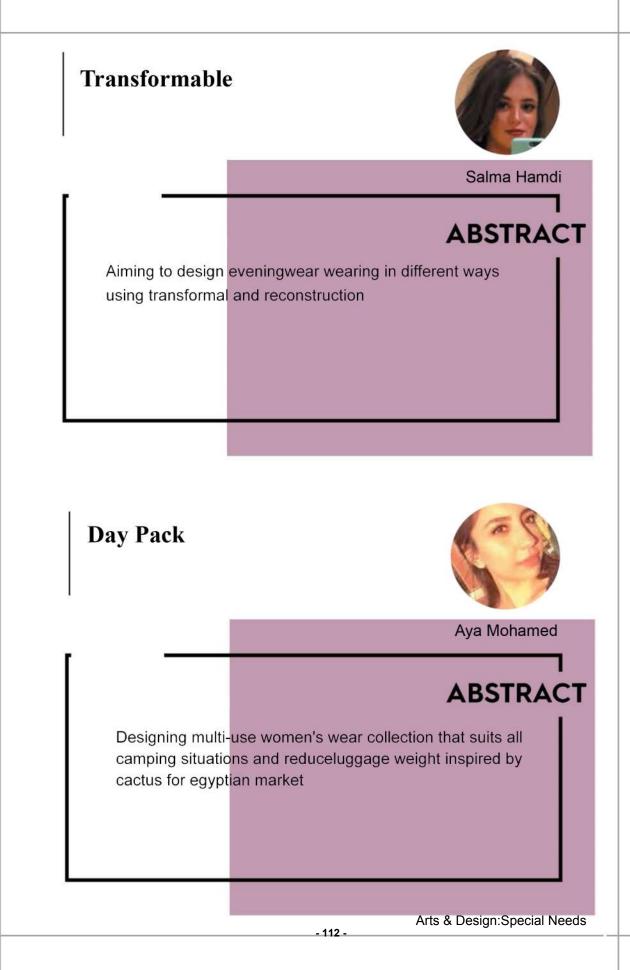
## ABSTRACT

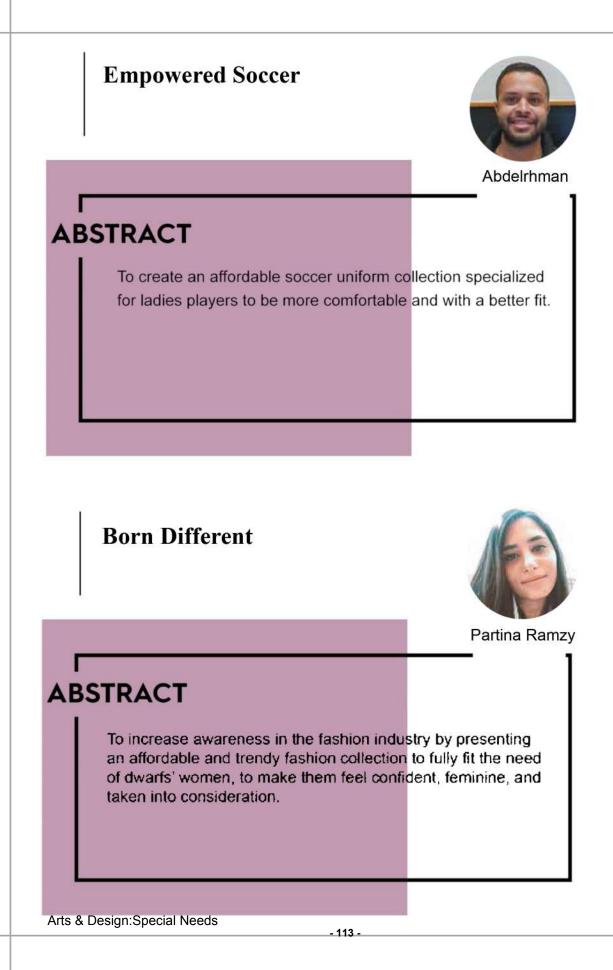
Summer spring men 'swear 2020 collection that provides customers with functional outfits that serves their busy lifestyle clothing requirements conveying slow fashion production policy to reduce the negative impact of fashion industry on animals, individuals and environment more over offering better aesthetic designs that suits Arabians fashion taste using multi look technique for each outfit.

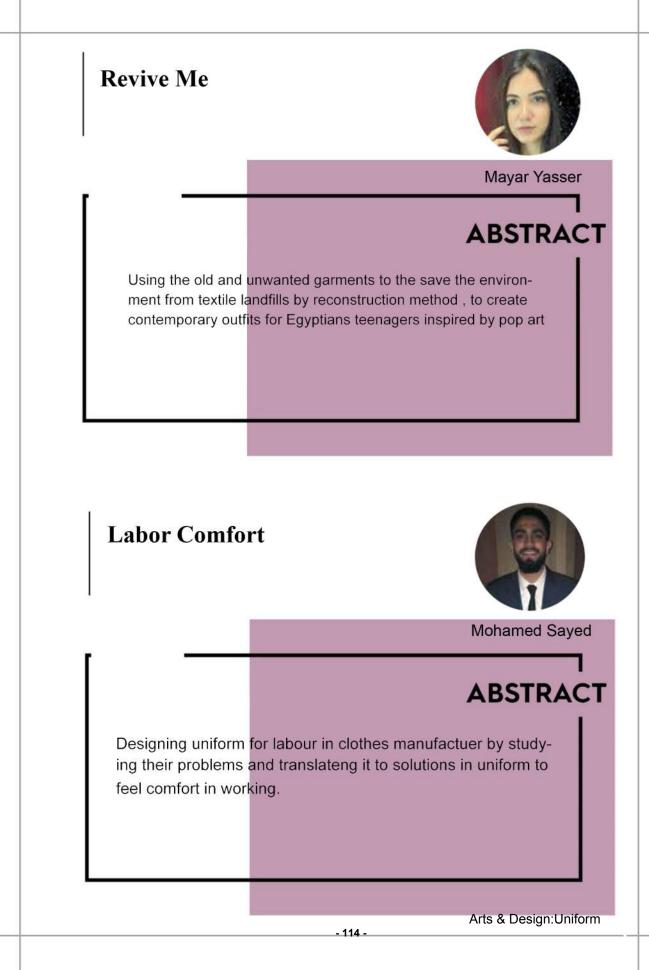


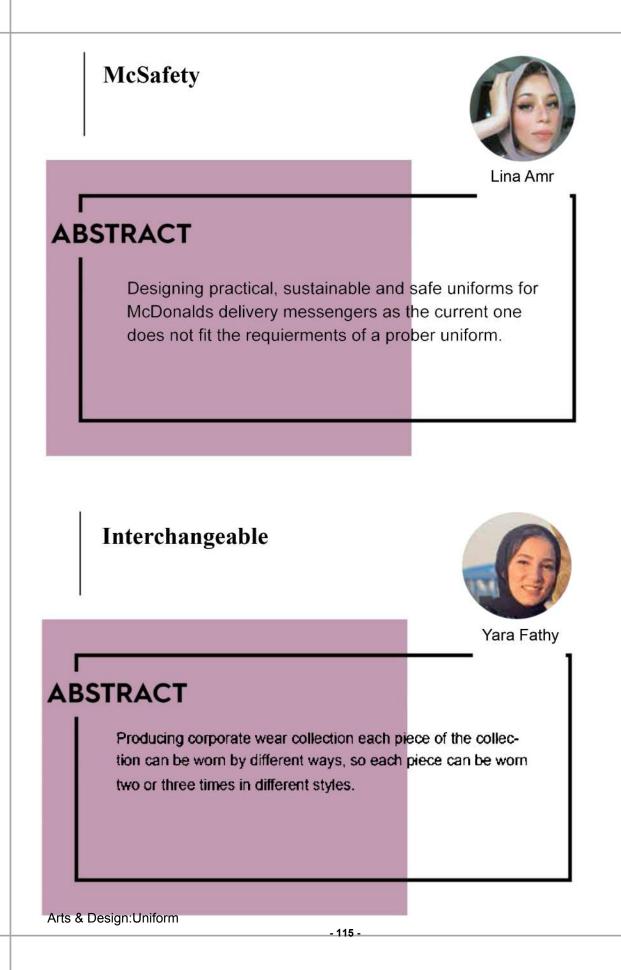


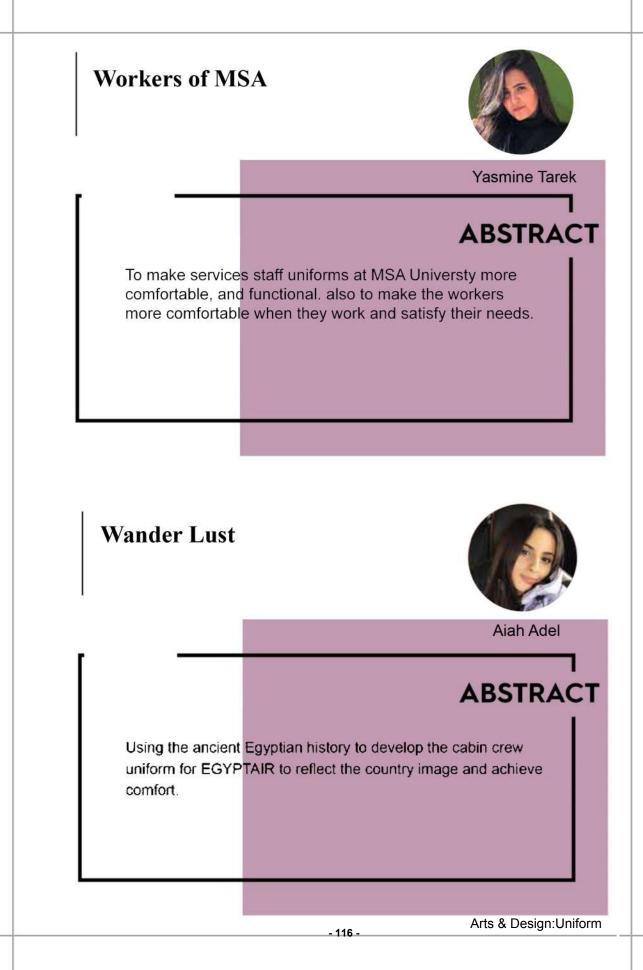


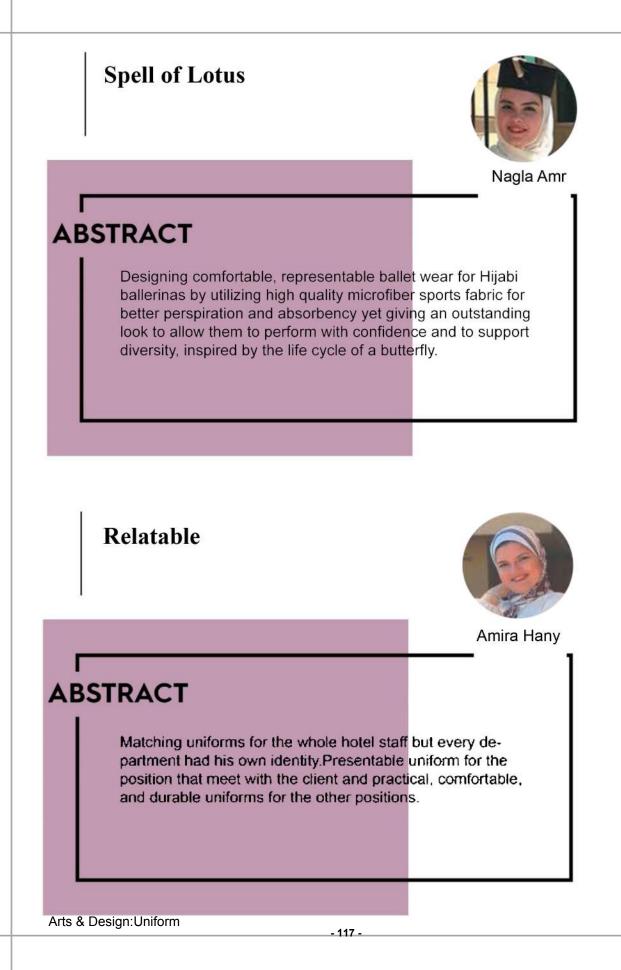












# FACULTY OF BIOTECHNOLOGY

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#### **Genetic Analysis of F Protein Gene of Recently Isolated Newcastle Disease Virus**

التحليل الجيني لجين البروتين F لفيروس مرض نيوكاسل المعزول حديثًا

#### Abdularhman Sayed Metwally Sayed

#### 162141

Host place: Research Center of Poultry Disease Internal Supervisor: Dr. Gehan Safwat External Supervisor: Prof. Mohamed Shakal Name of Journal: Journal of World Poultry Research

## ABSTRACT

Newcastle disease is an infectious mild to lethal virus disease of birds specifically the domestic chicken. NDV is an enveloped virus with two membrane proteins; the haemagglutinin-neuraminidase and the fusion protein. The main object of the current study is to do a molecular identification of both surface glycoproteins genes of NDv virions of a recently isolated field strain during 2019. Tracheas were collected from 10 chicken - NDv vaccinated broilers flocks suffered from mild to moderate respiratory manifestations. Only 5 samples showed HA activity after blind Propagation at SPF eggs and only one sample (S4) was +Ve APMV-1 by rtRT-PCR. Sequence of the cleavage site of the F protein gene showed typical known sequence of velogenic NDv strains (112RRQKRF117).

Keywords: Newcastle Disease, Velogenic, Poultry industry, and Broilers.

يعد مرض نيوكاسل مرضًا معديًا خفيفًا إلى فيروسات مميتة للطيور. الهدف الرئيسي من الدراسة الحالية هو إجراء تحديد جزيئي لكل من جينات البروتينات السكرية السطحية لفيروسات NDV من سلالة حقل معزولة مؤخرًا. تم جمع القصبة الهوائية من 10 دجاج – لقاح NDV – أسراب الفروج التي عانت من مظاهر تنفسية خفيفة إلى متوسطة. أظهرت 5 عينات فقط نشاط HA بعد الانتشار الأعمى في بيض SPF وكانت عينة واحدة فقط إيجابية تم تحليلها بواسطة RTT-PCR الكلمات الدالة. مرض نيوكاسل، فيلوجينك. صناعة الدواجن، دجاج التسمين.

## JWPR

**Poultry Research** 

**2019, Science line Publication** J. World Poult. Res. 9(1): 00-00, Mar 25, 2019

> Review Paper, PII: S2322455X1900000-9 License: CC BY 4.0



#### Molecular Identification of a velogenic Newcastle Disease Virus Recently Isolated from Egypt.

Shakal M.<sup>1\*</sup>, Mira Maher<sup>2</sup>, Abdulrahman S. Metwally<sup>2</sup>, Mohammed A. AbdelSabour<sup>3</sup>, Yahia M. Madbbouly<sup>3</sup>, Gehan Safwat<sup>2</sup>

<sup>1</sup>Department of Pouliry Diseases, Faculty of Veterinary Medicine, Cairo University, 12211 Giza, Egypt.

<sup>2</sup> Faculty of Biotechnology, October University for Modern Sciences and Arts, MSA, 6<sup>th</sup> of October city, Egypt.

<sup>3</sup>Veterinary Serum and Vaccine Research Institute, VSVRI, ARC, Abbassia, Cairo 11381, Egypt.

\*Corresponding Author's Email: shakal2000@gmail.com.

Received: 25 Mo. 2019 Accepted: 17 Mo. 2019

#### MMP13 is a New Tumor Marker for Breast Cancer Diagnosis

تشخيص سرطان الثدي باستخدام MMP13 كعلامة جديدة للورم



**Ehsan Mohamed Sobhy** 

#### 172525

Host place: Baheya Hospital Internal Supervisor: Dr. Gehan Safwat External Supervisor: Prof. Mahmoud Kamel



Breast cancer is lead malignancy in women worldwide and is easily curable in its early stages when detected. MMP13 is a blood tumor marker which makes it easy to detect, and potentially a readily available, noninvasive diagnostic tool. In this research, MMP13 levels in serum samples were measured using sandwich ELISA technique. Patients were 88 Egyptian breast cancer patients from Baheya hospital divided into three categories:18 benign (control), 35 malignant, and 35 metastatic. The results showed that the benign samples were used as control where normally MMP13 levels were found to be low. Malignant and metastatic patients had significantly high levels of MMP13 as speculated by previous research.

Keywords: Breast cancer, Biomarker, Tumor marker, MMP13, Early detection.

MMP13 MMP13

MMP13

Breast cancer, Biomarker, Tumor marker, MMP13, Early detection.

Keywords: Breast cancer, Biomarker, Tumor marker, MMP13, Early detection.

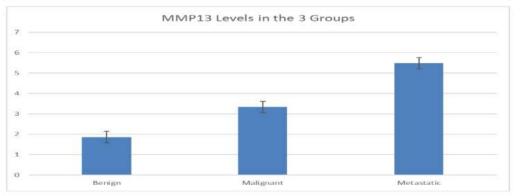
Image: Breast cancer, Biomarker, Tumor marker, MMP13, Early detection.

Image: Breast cancer, Biomarker, Tumor marker, MMP13, Early detection.

Image: Breast cancer, Biomarker, Tumor marker, MMP13, Early detection.

Image: Breast cancer, Biomarker, Tumor marker, Biomarker, Bioma

مُستويات MMᢆP13 منخفضة عادة. كان لدى المرضى الُخبيثة والنقيلية مستُوياتٌ عالية بشكل ملحوظ من MMP13 كما تم تأكيده من قبل بحث سابق. الكلمات الدالة: سرطان الثدى، المؤشرات الحيوية، علامة الورم، الكشف المبكر.





## Treatment potential of *Azadirachtia indica* methanol extract against schistosomiasis in mice

العلاج المحتمل لمستخلص الميثانول Azadirachtia indica ضد مرض البلهارسيا في الفئران



#### Waad Ramadan Aboelhassan Gaballah

#### 175343

Host place: Cairo University, Faculty of Science, Immunology Department Internal Supervisor: Dr. Ashraf Bakar External Supervisor: Prof. Azza El-Amir Name of Journal: Journal of the Egyptian Society of Parasitiology



## ABSTRACT

Azadirachta indica is known as neem Indian plant, that is proved to be effective against a number of insects' parasites of crops. This study was undertaken to visualize the effect of Azadirachta indica against shcistosomiasis compared to other drugs, where male inbred CD1 mice weighted  $20 \pm 2$  gm used in this study by dividing 160 mice into 7 groups. 3 groups of the infected mice administered orally by Azadirachta indica extracted with methanol for a period from 3 to 5 weeks and other administrated orally by praziquental (PZQ). The immunological results showed that the infected mice treated by A. indica reduced the granuloma diameter and PI showed more prevalence of small sized granulomas and decrease in the level of IgG compared to the PZQ that had no effect on the levels of Igs. **Keywords:** PZQ, methanol plant extracts, Hepatic granuloma, IgG.

يُعرف أزاديراشتا إنديكا باسم نبات النيم الهندي ، والذي آثبت فعاليته ضد عدد من طفيليات الحشرات في المحاصيل. الهدف من هذه الدراسة هو تصور تأثير أزاديراشتا إنديكا ضد داء الشيستوزوما مقارنة بالأدوية الأخرى. أظهرت النتائج المناعية أن الفئران المصابة التي عولجت بواسطة الازاديراشتا إنديكا قللت من قطر الورم الحبيبي وأظهر PI انتشارًا أكبر للأورام الحبيبية صغيرة الحجم وانخفاض مستوى IgG مقارنة بـ PZQ التي لم يكن لها تأثير على مستويات Igs.

الكلمات الدالة: PZQ ، مُستخلصات نبات الميثانول ، الورم الحبيبي الكبدي ، IgG.

Journal of the Egyptian Society of Parasitology, Vol.50, No.1, April 2020 J. Egypt. Soc. Parasitol. (JESP), 50(1), 2020: 79 - 86

#### THE EFFICACY OF DIZYGTHECA KERCHOVEANA AND AZADIRACHTA INDICA EXTRACTS AS A MOLLUSCICIDAL AND SCHISTOSOMICIDAL AGENTS IN MICE

Ву

AZZA M. EL AMIR<sup>1</sup>, ALYAA A. FARID<sup>1</sup>, MARIAM MOHAMED<sup>2</sup>, WAAD RAMADAN<sup>2</sup>, and AYMAN ALI DIAB<sup>2\*\*</sup>

Department of Zoology, Faculty of Science, Cairo University<sup>1</sup>, and Faculty of Biotechnology, October University for Modern Sciences and Arts<sup>2</sup> (MSA), Egypt (<sup>\*</sup>Correspondence: azzaelamir@yahoo.com, https://orcid.org/0000-0003-4457-6899)

#### Association between the frequency of IL-4 590C>T gene polymorphisms and susceptibility to type 2 diabetes mellitus

الارتباط بين تواتر تعدد الأشكال الجينية IL-4 590C> T وقابلية الاصابة بداء السكري من النوع الثاني



#### Yehia Mohamed Kamal Ismail Abouelyosr

172355

Host place: MSA University, Faculty of Biotechnology Internal Supervisor: Dr. Hossam Taha External Supervisor: Dr. Hossam Taha

ABSTRACT



Interleukin 4 (IL-4) is a cytokine which is encoded by IL4 gene, it plays a role to activate the differentiation of the native T helper cells (Th0) into a normal T-helper 2 cells (Th2). The aim of the present study is to probe for the association of IL4-590 C>T with TDM in Egyptian patients. DNA extraction was performed on collected 44 blood samples from diabetic patients. detection of IL-4 590 C>T gene polymorphism was done using ARMS-PCR, and visualized by gel electrophoresis. The results revealed a strong association between T2DM and family history. Our data also showed that IL-4(590C>T) genotypes carrying the high-risk allele [(CT) and (TT)] were more frequent in T2DM patients compared to healthy volunteers. **Keywords:** Diabetes, Type 2 diabetes mellitus. Cytokines. Interleukin 4 Interleukin 4 (IL-4) is a cytokine which is encoded by IL4 gene, it

**Keywords:** Diabetes, Type 2 diabetes mellitus, Cytokines, Interleukin 4.

الهدف من هذه الدراسة هو البحث عن ارتباط IL4-590 C> T مع TDM في المرضى المصريين. تم إجراء استخراج الحمض النووي على 44 عينة دم تم جمعها من مرضى السِّكري. تم الكشفُ عن تعدد الأشكال الجيني IL-4 590 Ć> T باستخدام ARMS-PCR ، وتصور عن طريق الرحلان الكهربائي للهلام. أظهرت النتائج وجود علاقة قوية بين T2DM وتاريخ الأسرة. أظهرت بياناتنا أيضًا أن الأنماط الجينية T </2005) 4-أأل) التي تحمِّل الأَلِيل عالى المخاطَّر [(TT)) و (TT)] كانت أكثر تواتراً في مرضى T2DM مقارنةً بالمتطوعين الأصحاء.

الكلمات الدالة: داء السكرى ، داء السكرى من النوع الثاني ، السيتوكينات ، إنترلوكين 4 (IL-4).

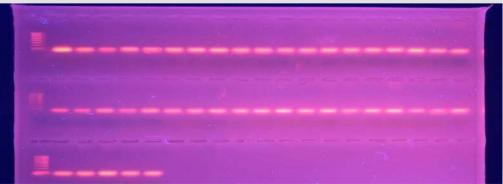


Figure (2): Gel electrophoresis images of ARMS PCR product represents the frequency of IL-4 (590C>T) genotypes among T2DM patients. **Biotechnology: Medical** 

#### Biohydrogels Reinforced with Graphene Oxide as an Ecofriendly Nanocarrier for Controlled Drug Delivery

تعزيز الهيدر وجيلات الحيوية بأكسيد الجرافين لاستخدامها كناقلات نانوية صديقة للبيئة للعقاقير الموجهة



#### Mai Yasser Salah

#### 170923

Host place: National Center for Radiation Research and Technology, Atomic Energy Authority Internal Supervisor: Dr. Reham Mohsen External Supervisor: Dr. Asmaa Sayed



## ABSTRACT

In recent years, polymer nanocomposites are widely prepared for different biomedical applications such as controlled drug release systems. The aim of this study was preparation of pH-sensitive drug carrier from Starch (ST) and 2-Hydroxyethyl methacrylate (HEMA) reinforced with graphene oxide (GO) nanocomposite hydrogel (ST-PHEMA/GO) in aqueous solution. The effect of environmental parameters such as pH on the swelling kinetics and the efficiency of the nanocarrier in releasing the drug was tested on breast cancer cells MCF-7. TEM and XRD analysis confirmed the present of GO in the polymer matrix in the nano scale. The nanocarrier loading the drug showed high toxicity to the cancerous cells manifesting its ability to be used in the controlled drug delivery medicine.

**keywords**: Starch; graphene oxide; Nanocomposite; Drug delivery; Radiation.

الهدف من هذه الدراسة تحضير ناقلة أدوية حساسة للأس الهيدروجيني من النشا (ST) و 2–هيدروكسي ميثيل ميثاكريلات (HEMA) معززة بأكسيد الجرافين ( (GO Manocomposite hydrogel (ST-PHEMA) في محلول مائي. تم اختبار تأثير المعلمات البيئية مثل الأس الهيدروجيني على حركية التورم وكفاءة الناقل النانوي في إطلاق الدواء على خلايا سرطان الثدي MCF-7. ظهر الناقل النانوي الذي يحمل الدواء سمية عالية للخلايا السرطانية مما يدل على قدرته على الاستخدام في دواء توصيل الدواء الخاضع للرقابة. الكمات الدالة، النشا. أكسيد الجرافين نانو مركب. توصيل الأدوية، إشعاع.

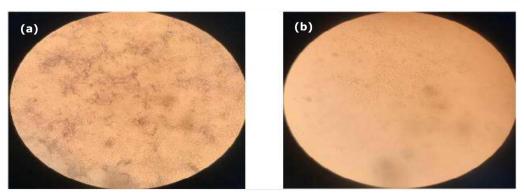


Figure (3): (a) Well of MCF-7 control cells. (b) Well of MCF-7 after adding the nanocomposite G2 at 30kGy loaded with Doxorubicin

#### **Biotechnology: Pharmaceutical**

## Biosynthesis and characterization of gold nanoparticles from natural plant extract

التخليق الحيوي وتوصيف جزيئات الذهب النانوية من خلاصة النباتات الطبيعية

#### Mahmoud Sayed Ayat Emam



172069

Host place: Nanotech Center Internal Supervisor: Dr. Reham Mohsen External Supervisor: Dr. Ola M. El-Borady



Gold nanoparticles (AuNPS) showed various biomedical applications in recent years. the current study aimed to use the parsley (Petroselinum crispum) leaves extract in order to synthesis AuNPs by a simple eco-friendly method. The produced NPs were characterized using UV-vis spectroscopy while the structural and morphological of the formed NPs was performed via (TEM), (FTIR), (DLS) as well as zeta potential. The TEM images taken for the formed NPS revealed the formation of particles with average size around 25 nm possessing semispherical shapes. Furthermore, the surface Plasmon resonance appeared at 530 nm. The detection of zeta potential at value less than -30 mV indicts the NPS stability.

Keywords: Nanotechnology, gold, nanoparticles, TEM, Parsley.

أظهرت الجسيمات النانوية الذهبية تطبيقات طبية حيوية مختلفة في السنوات الأخيرة. تهدف الدراسة الحالية إلى استخدام مستخلص أوراق البقدونس من أجل توليف AuNPs بطريقة بسيطة صديقة للبيئة. تم تمييز NPs المنتجة باستخدام التحليل الطيفي للأشعة فوق البنفسجية بينما تم إجراء التركيبية والمورفولوجية لل NPs المشكلة عبر (TEM) و (FTIR) و (DLS) وكذلك إمكانات زيتا. كشفت صور TEM التي تم التقاطها لـ NPS المشكلة عن تكوين جسيمات بمتوسط حجم حوالي 25 نانومتر يمتلك أشكالًا شبه كروية. علاوة على ذلك ، ظهر رنين البلازمون السطحي عند 530 ناتومتر. يشير الكشف عن إمكانات زيتا بقيمة أقل من –30 m إلى استقرار NPS. الكلمات الدالة، تكنولوجيا النانو ، الذهب ، الجسيمات النانوية ، TEM ، البقدونس.

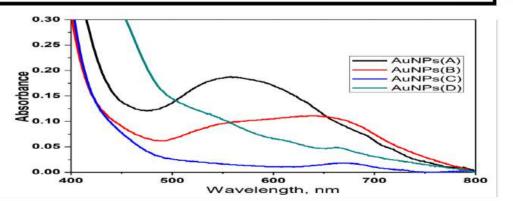


Figure (4): UV absorbing of GNPS, the SPR band was observed at 562nm, 665 nm, 669, and 661 nm for AuNPs(A)20ml, AuNPs(B)10ml, AuNPs(C)5ml, AuNPs(D)2.5ml respectively

**Biotechnology: Pharmaceutical** 

ABSTRACT

#### ZnO nano-solvent foe efficacy enhancenemnt of some antibiotics in poultry

تحسين فعالية بعض المضادات الحيوية فى الدواجن باستخدام مذيب نانو أكسيد الزنك

#### Emadaldin Salah Kassem

#### 160895

Host place: Research Center of Poultry Disease **Internal Supervisor:** Dr. Gehan Safwat **External Supervisor:** Prof. Mohamed Shakal Name of Journal: Journal of World Poultry Research

## ABSTRACT

The aim of this study was to investigate zinc oxide (ZnO) nanoparticles in vitro antibacterial properties against avian pathogenic E. coli alone and in combination with different antibiotics. In this study, ZnO nanoparticle was synthesized using direct precipitation method. Physical characteristics of ZnO NPs were confirmed using X-Ray diffraction (XRD) and Transmission Electron Microscopy (TEM). different concentration of ZnO NPs, was determined by disc diffusion assay on 10 avian pathogenic E. coli. The combination between antibiotic and ZnO NPs showed a synergistic effect with spiramycin, gentamycin and streptomycin while an antagonistic effect was observed between ZnO NPs and Ciprofloxacin and Enrofloxacin.

Keywords: ZnO NPs, APEC, antibiotic.

الهدف من هذه الدراسة هو التحقق من الجسيمات النانوية لأكسيد الزنك (ZnO) في الخواص المضادة للجراثيم، في المختبِّر ضد بكتّيريا E. coli المسِّببة للأمراض وحدها وبالاقتران مع المضادات الّحيوية المّختلفة. في هذه الدرّاسة ، تم تصنيع الجسيمات النانوية ZnO باستخدام طريقة الترسيب المباشر. تم تأكيد الخصائص الَّفيزيائية لذ ZnO NPs باستخدام (XRD) و (TEM). تم تحديد تركيز مختلف من NPs بواسطة فحص انتشار القرص على E. coli 10 المسببة للأمراض الطيور. أظهر الجمع بين المضادات الحيوية و ZnO NPs تأثيرًا تآزريًا مع spiramycin و gentamycin و stréptomycin بينها لوحظ تأثير مضاًد بيُن ZnO NPs و .Enrofloxacin <sub>9</sub> Ciprofloxacin

الكلمات الدالة: APEC ،ZnO NPs ، مضاد حيوى

**IWPR** Journal of World's

2020, Scienceline Publication J. World Poult. Res. 10(2S): 278-284, June 14, 2020 Research Paper, PII: \$2322455X2000033-10



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In Vitro Evaluation of Antibacterial Properties of Zinc Oxide

Nanoparticles alone and in Combination with Antibiotics against Avian Pathogenic E. coli

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**Biotechnology: Pharmaceutical** 

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## Silymarin-Loaded Polymeric Nanocarriers for Cancer Treatment

الناقلات النانوية البوليمرية المحملة بسيليمارين لعلاج السرطان



#### Mazin Hesham Abulfotouh Ismaeil Youssef

173573

Host place: Nanotechnology Research Center, British University in Egypt Internal Supervisor: Dr. Amr Ageez External Supervisor: Prof. Samah Lotfy



Human liver cancer is the fifth most common cause of cancer deaths. Commercial therapies like anticancer drugs, chemotherapies and radiotherapies are known to have limited efficacy and numerous side effects. Silymarin is a natural substance, characterized with anti-oxidative and chemo protective properties against many cancers. In the current research we proposed a novel approach that involves encapsulating silymarin into chitosan nanoparticle as an efficient and highly specific drug delivery system that can target human liver cancerous cells without affecting normal cells. All prepared nanomaterials were screened for their cytotoxic effect on Huh7 as an in vitro model of human liver cancer and examined for morphological changes under inverted microscope.

**Keywords:** Chitosan nanoparticles, Silymarin, Characterization Cytotoxicity.

سرطان الكبد البشري هو خامس أكثر الأسباب شيوعًا لوفيات السرطان. في البحث الحالي ، اقترحنا نهجًا جديداً يتضمن تغليف سيليمارين في جزيئات النانو الشيتوزان كنظام توصيل دوائي فعال ومحدد للغاية يمكنه استهداف الخلايا السرطانية في الكبد دون التأثير على الخلايا الطبيعية. تم فحص جميع المواد النانوية المعدة لتأثيرها السام للخلايا على Huh7 كنموذج مختبري لسرطان الكبد البشرى وفحص التغييرات المورفولوجية تحت المجهر المقلوب.

**الكلمات الدالة**: الجسيمات النانوية الشيتوزان ، سيليمارين ، توصيف السمية للخلايا.

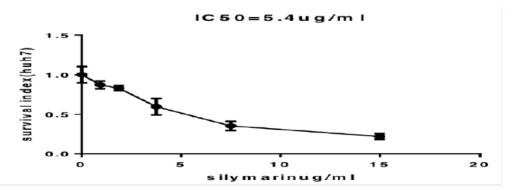


Figure (5): IC50 value of Silymarin on Huh 7 cell line.

**Biotechnology: Pharmaceutical** 

## Chitosan Biopolymer Based Nanocomposite Hydrogels for Removal of Methylene Blue Dye

استخدام نانو هيدروجيل المصنع من الشيتوزان لإزالة صبغة الميثيلين الزرقاء

#### Marian Thabit Kamel Amin

#### 141777

Host place: Egyptian Atomic Energy Authority Internal Supervisor: Dr. Gehan Safwat External Supervisor: Dr. Asmaa Sayed Name of Journal: SN Applied Sciences

## ABSTRACT

There are many ways to treat the water and the Nanocomposites hydrogel is the most commonly used method in the treatment of textile wastewater. Nanocomposite hydrogels are nanomaterial-filled, hydrated, polymeric networks that exhibit higher elasticity and strength relative to traditionally made hydrogels. Nanocomposite hydrogels were synthesized by  $\gamma$ -radiation induced copolymerization and crosslinking of acrylic acid in the presence of Chitosan biopolymer and TiO2 nanoparticle. The nanocomposites hydrogel was used for the adsorption of methylene blue dye from water. The influence of TiO2 nanoparticle content on adsorption were studied. It was found that the highest uptake present was 99% at 50 ° C and Titanium Dioxide present 3%.

Keywords: dye removal, gamma radiation, nanocomposite, chitosan.

تم تصنيع الهلاميات المائية النانوية المركبة بواسطة البلمرة المشتركة الناتجة عن الإشعاع γ والربط المتشابك لحمض الأكريليك في وجود بوليمر حيوي Chitosan و Chitosan و TiO2 nanoparticle. تم استخدام هيدروجيل المركبات النانوية لامتصاص صبغة الميثيلين الزرقاء من الماء. تمت دراسة تأثير محتوى الجسيمات النانوية TiO2 على الامتزاز. وقد وجد أن أعلى امتصاص كان 99٪ عند 50 درجة مئوبة وثاني أكسيد التيتانيوم موجود 3٪.

الكلمات الدالة: إزالة الصبغة ، أشعة جاما ، النانو المركب ، الشيتوزان.

**Research Article** 

## Chitosan biopolymer based nanocomposite hydrogels for removal of methylene blue dye



Ghada A. Mahmoud<sup>1</sup> · Asmaa Sayed<sup>1</sup> · Maryan Thabit<sup>2</sup> · Gehan Safwat<sup>2</sup>

Received: 30 January 2020 / Accepted: 15 April 2020 © Springer Nature Switzerland AG 2020

#### Abstract

Nanocomposite hydrogels were synthesized by  $\gamma$ -radiation-induced copolymerization and crosslinking of Chitosan biopolymer (CS), acrylic acid (AAc) and TiO<sub>2</sub> nanoparticles (CS-PAAc/TiO<sub>2</sub>). The structure, morphology, and properties of the nanocomposites were investigated using Fourier-transform infrared spectroscopy, X-Ray Diffraction, Scanning electron microscopy, Transmission electron microscopy, and thermogravimetric analysis techniques. The nanocomposites

#### **Biotechnology: Environmental**

#### **Biodegradation of Total Petroleum Hydrocarbons (TPHs) by Bacillus Cereus, Myroides species and Enterobacter species under different environmental conditions**

التحلل الحيوي لإجمالى الهيدروكربونات البترولية من قبل أنواع بكتيريا مختلفة تحت ظروف بيئية مختلفة

#### Yara Essam Mohamed Shaban



163611

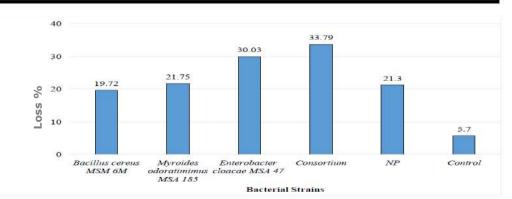
Host place: MSA University, Faculty of Biotechnology Internal Supervisor: Prof. Ali Diab External Supervisor: Prof. Ali Diab



Different types of bacteria are able to clean up the polluted sites. In the present work, three bacterial species were used separately and in combination to biodegrade crude oil polluting marine water. Identification of the 3 bacteria was done using gene sequencing of 16s rRNA and screened for the production of biosurfactants and bio-emulsifiers using different media, different NaCl concentrations and different pH values. The results showed that the 3 bacterial strains and their metabolites a potential use in the biological bioremediation and clean-up of polluted marine environments. The results of the biodegradation of crude oil in the polluted sea water show that after 40 days incubation period, the bacterial consortium succeeded to degrade a maximum of  $64.37 \pm 1.8\%$ .

#### Keywords: Biodegradation, Petroleum Hydrocarbons, pH.

تم استخدام ثلاثة آنواع من البكتيريا بشكل منفصل وفي توليفة لتحلل النفط الخام الملوث بالمياه البحرية. تم تحديد البكتيريا الثلاثة باستخدام التسلسل الجيني لـ rsNAs 165 وتم فحصه لإنتاج العوامل الحيوية والمستحلبات الحيوية باستخدام وسائط مختلفة وتركيزات NaCl مختلفة وقيم الأس الهيدروجيني المختلفة. أوضحت النتائج أن السلالات البكتيرية الثلاثة ونواتج أيضها يمكن أن تستخدم في المعالجة البيولوجية البيولوجية وتنظيف البيئات البحرية الملوثة. أظهرت نتائج التحلل الحيوي للنفط الخام في معياه البحر الملوثة أنه بعد 40 يومًا من فترة الحضانة ، نجح اتحاد البكتيريا فى التحلل الحيوي للنفط الخام في مياه البحر الملوثة أنه



الكلمات الدالة؛ التحلل البيولوجي ، الهيدروكربونات البترولية ، الأس الهيدروجيني.

Figure (6): Biodegradation (loss %) of PHCs by the different bacterial strains and their consortium. NP is also given.

#### **Biotechnology: Environmental**

ABSTRACT

#### Bacteria as a bioindicator for water pollution

البكتيريا كمؤشر حبوى لتلوث المباه

Meret Talat Tawfik Gaber

165399

**Host place:** Metalab Diagnostic Laboratories Internal Supervisor: Prof. Salwa Sabet External Supervisor: Dr. Mohamed Hussein

## 0650

## ABSTRACT

The presence of E. coli in water indicates recent fecal contamination and may indicate the possible presence of disease-causing pathogens, such as bacteria, viruses, and parasites. The aim of this thesis is to examine methods currently in use for the detection of coliforms in different source of water, bacterial growth on nutrient media. Isolated bacterial colonies were then gram stained and tested using several biochemical tests to identify the strain of bacteria. The identified bacteria were Klebsialla, Escherichia coli, staphylococcus aureus and staphylococcus epidermidis Finally, count total coliform bacteria using CFU proving amounts of bacteria compared to other bacteria in different source of water.

**Keywords:** water pollution, bacterial identification, total coliform, fecal coliform, CFU.

يشير وجود *E. coli* في الماء إلى تلوث برازي حديث وقد يشير إلى احتمال وجود مسببات الأمراض، مَثلُ ٱلْبَحْتِيرِيا والفيروسات والطفيليات. الْهُدَّف من هُذا الْبحثُ هُوَ فحص الْطُرُق المستخدمة حَاليًا للكَشفُ عنَّ القُولونيَّات في مصادر مُختلفة من المَّاء ، والنَّمو البِكُتيري علَّى الوَّسائط الغذائية. تم بعد ذلك صبغ المستعمرات البكتيرية المعزولة بالجرام واختبارها لتحديد سآلاة ألبكتيريا. تم تحديد أنواع بكتيريا مختلفة. و أخيرًا، تم عد إجهالي البكتيريا *E. coli* باستخدام كميات CFU التي تثبت بِحُتِيرِيا مِقارِنة بِالبِحَتِيرِيا الأَخَرِي فِي مَصِدر مَخْتَلِف لِلمِياهِ.

الكلمات الدالة: تلوث المياه ، تحديد البكتيريا ، القولون الكلبي ، القولون البرازي.

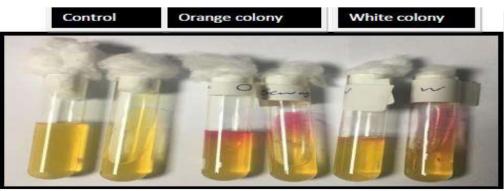


Figure (7): Streaking of sewage coliform bacteria on urease media \*orange colony - top positive pink color-gram negative > Klebsiella \*white colony - weak top pink color - gram negative > F.Coli **Biotechnology: Environmental** 

## Effect of Waste Tea Leaves and Waste Frying Oil on the Bioremediation of Petroleum Polluted Soil

تأثير أوراق الشاي وزيت القلي على المعالجة الحيوية للتربة الملوثة بالبترول

#### Amira Alaa Reyad Shendy

#### 171821

Host place: MSA University, Faculty of Biotechnology Internal Supervisor: Prof. Ali Diab External Supervisor: Prof. Ali Diab





Bioremediation of the PHC polluted sites is promising strategy, it is cost effective and safe for the environment. The aim of the present work was remediating the polluted sandy soil by using the effect of certain additives such as waste frying oil, waste tea leaves, NP fertilizer and combination of these materials; on the microbial counts of this soil and on the biodegradation of the oil. The results showed that in presence of WFO alone of different PAH individuals were completely degraded (100%), of the 7PAHs 3 PAHs were known to be carcinogenic compounds. Mixing the WFO with T+NP resulted in the complete degradation of 5 PAH individuals, of which two only are 5 carcinogenic PAHs. **keywords**: Petroleum hydrocarbons, bioremediation, oils.

تعتبر المعالجة الحيوية للمواقع الملوثة للرعاية الصحية الأولية استراتيجية واعدة ، فهي فعالة من حيث التكلفة وآمنة للبيئة. كان الهدف من هذا العمل هو معالجة التربة الرملية الملوثة باستخدام تأثير بعض الإضافات مثل زيت القلي وأوراق الشاي، وأسمدة النيتروجين ومزيج من هذه المواد. على التهم الميكروبية لهذه التربة وعلى التحلل الحيوي للزيت. أوضحت النتائج أنه في وجود WFO وحده من أفراد PAH مختلفين تم تحللهم بالكامل (100 ٪) ، من الـ 7 PAHs 3 PAHs كانت معروفة بأنها مركبات مسرطنة. أدى خلط WFO مع MFS مع PAHs 7 إلى تدهور كامل لـ 5 أفراد PAH ، منهم اثنان فقط PAHs مسرطنة.

الكلمات الدالة: هيدروكربونات بترولية ، معالجة حيوية ، زيوت.

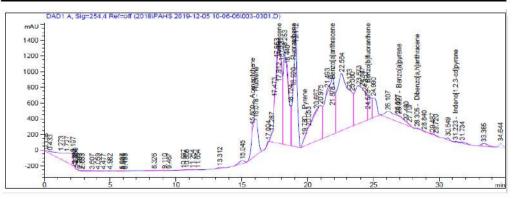


Figure (8): Oil treated with spent tea leaves and waste frying oil (WFO)

#### **Biotechnology: Environmental**

ABSTRACT

#### **Efficiency of Chitosan / Silver Nanoparticle for Improvement of Water Quality**

كفاءة الشيتوزان / الجسيمات النانوية الفضية لتحسين جودة المياه

#### Mahmoud Mostafa Fathy Waziry



Host place: Veterinary Medicine, Cairo University Internal Supervisor: Dr. Samer El Sayed External Supervisor: Dr. Manal Moustafa

#### 回新回 78333-17334

## ABSTRACT

Chitosan nanoparticles (CNPs) have been considered potential antibacterial agents effective against a large variety of microorganisms. In addition to graphene oxide which plays a critical role in removal of heavy metals beside its antimicrobial activity. This research mentions a critical estimation of the contribution of the mixed GO\CS nanomaterials in water treatment taken from several sites in Egypt. Nanocomposites have been prepared by mixing the aqueous solution of chitosan and graphene oxide in the present of diluted acetic acid and the characterization of nanomaterial achieved by using TEM. The water examination was conducted and showed positive results in the elimination and removal of water contaminant upon subjecting of nanocomposites.

Keywords: Chitosan, Graphene oxide, Nanotechnology, Wastewater,

يشير هذا البحث إلى تقدير نقدي لمساهمة المواد النانوية المختلطة CS \ GO في معالجة المياه المأخوذة من عدة مواقع في مصر. تم تحضير المركبات النانوية عن طريق خلط المحلول المائي من الشيتوزان وأكسيد الجرافين في وجود حمض الأسيتيك المخفف وتوصيف المواد النانوية التي تم تحقيقها باستخدام TEM. تم إجراء فحص المياه وأظهر نتائج إيجابية في إزالة وإزالة ملوث المياه عند إخضاع المركبات النانوية.

الكلمات الدالة: الشيتوزان ، أكسيد الجرافين ، تكنولوجيا النانو ، مياه الصرف الصحى.

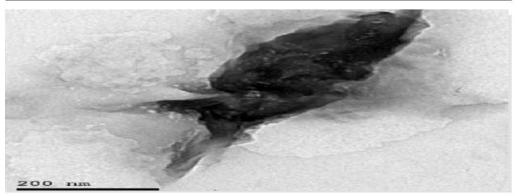


Figure (9): Shows the TEM images of GO/CS nanocomposite

#### **Biotechnology: Environmental**

#### Maintaining Postharvest Quality of Fruits by Using Essential Oils

الحفاظ على جودة الفاكهة بعد الحصاد عن طريق الزيوت العطرية



#### Nada Hamdy Mabrouk Ahmed Eshiba

#### 171985

Host place: Biotechnology Lab, Agricultural Research Center Internal Supervisor: Dr. Osama Saad

**External Supervisor:** Dr. Gehan Ahmed Mahmoud



Natural compounds such as essential oils get a lot of attention to be used as an alternative for chemical compounds as fungicides, due to their biodegradability. The objective of this study was made to test the effect of spraying the essential oils Peppermint and Lemongrass on date. The date fruits were sprayed with Peppermint and Lemongrass essential oils of concentration 1 and 2% for each. Antifungal activities of the two essential oils against Aspergillus niger and Penicillium were measured. Chemical compositions of the essential oils were identified by GC-MS. The results indicated that the physical and the chemical properties of the fruits were enhanced by sprayed with all essential oil treatments, along with the enhanced antifungal activities.

Keywords: Essential oil, fungicides, antifungal activity.

الهدف من هذه الدراسة هو اختبار تأثير رش الزيوت العطرية بالنعناع والليمون. تم رش ثمار التمر بزيوت النعناع والليمون العطرية بتركيز 1 و 2٪ لكل منها. تم قياس الأنشطة المضادة للفطريات للزيوت العطرية. كما تم تحديد التركيبات الكيميائية للزيوت الأساسية بواسطة GC-MS. أوضحت النتائج أن الخواص الفيزيائية والكيميائية للفاكهة تم تعزيزها بالرش بجميع معالجات الزيوت الأساسية ، إلى جانب الأنشطة المضادة للفطريات المعززة.

**الكلمات الدالة**؛ الزيوت العطرية، مبيدات الفطريات، النشاط المضاد للفطريات.

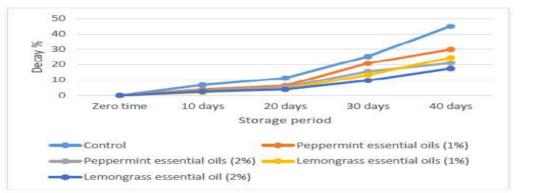


Figure (10): Effect of spraying Peppermint and Lemongrass essential oils at different concentrations on decav (%) of date fruits stored at room temperature.

**Biotechnology: Agricultural** 

ABSTRACT

## Tracking of heavy metals tolerance gene(s) in cultivated Egyptian Vicia faba varieties

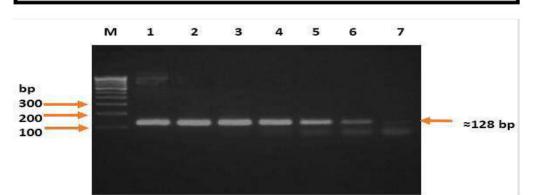
تتبع الجينات لبمسئولة عن تحمل المعادن الثقيلة في أصناف الفول المصري المزروعة.

#### Khaled Amr Mohamed Hafez

#### 170945

Host place: MSA University, Faculty of Biotechnology Internal Supervisor: Dr. Osama Saad External Supervisor: Dr. Osama Saad

#### ABSTRACT Contamination with heavy metals has many sources such as automobile, emission, fertilisers and mining. The purpose of this study was tracking heavy metals tolerant gene(s) in cultivated Egyptian *Vica faba* varieties to explore the response of *CAT* gene and the effects of soil contamination by selected metals. The expression levels of CAT gene were measured in two varieties in 5 locations. The CAT gene was over expressed in the roots. The highest expression was in Wadi 1 that is cultivated in South Delta and Central Egypt with approximately 23 folds and the lowest expression was in Wadi 1 that is cultivated in El Wadi El Gadeed with approximately 3 folds. Results showed that CAT expression is related to metal exposure. in addition to biotic and abiotic stresses. Keywords: Vicia faba, Heavy metals, Catalase enzyme. الغرض من هذه الدراسة هو تتبع الجينات التي تتحمل المعادن الثقيلة في أصناف الفول المصرية المزروعة لاستكشاف استجابة جين CAT وتأثيرات تلوث التربة بوآسطة معادن مختارة. تم قياس مستويات التعبير عن الجين CAT في نوعين في 5 مواقع. كان أعلى تعبير للجين في وادى 1 الذي يزرع في جنوب الدلتا ووسّط مصر بحّوالي 23 طية ، وكان أقل تعبير في وأدى 1 الذي يزَّرع في الوادي الجديد بحوالي 3 طيَّات. أُظهِّرت النتائج أُن تعبير CAT يرتبط بالتعرض للمعادن ، بالإضافة إلى الضغّوط الحيوية وغير الحيوية.



الكلمات الدالة؛ الفول المصرَى، المعادن الثقيلة، إنزيمُ الكاتالاز.

**Figure (11):** RT-PCR display on 1.2% agarose gel electrophoresis. Lane "M" 100 bp DNA ladder, lanes 1-7 the RT-PCR fragments of the 7 faba bean samples in the targeted size.

#### **Biotechnology: Agricultural**

#### The Plant Growth Promoting Activities of Actinomycetes

أنشطة تعزيز نمو النبات للفطريات الشعاعية

ABSTRACT



Mirna Kamal Kamel

#### 170087

Host place: Cairo University Research Park (CURP) Internal Supervisor: Dr. Samer El-Sayed External Supervisor: Dr. Tarek Ragab



The relationship between the plant and rhizosphere microorganisms depends on how the rhizosphere microorganism affects the plant. The goal of this study was to create a commercial bio-control agent composed of rhizosphere Actinomycetes ready to enhance the expansion of plants and enhance the plant defense system whereas additionally having the ability to survive within the rhizosphere. During this study, 19 bacterial strains of *Actinomycetes* were obtained to determine which strains have the highest effect on enhancing the plant growth. The greenhouse experiment indicated that Actinomycetes treated wheat plants had shown good growth parameters such as root and shoot length and weight compared to non-inoculated control plants.

Keywords: Rhizosphere, Actinomycetes, plant growth.

الهدف من هذه الدراسة هو إنشاء عامل تحكم حيوي تجاري يتكون من Actinomycetes بجزيئات الريزوسفير جاهز لتعزيز توسع النباتات وتعزيز نظام الدفاع عن النبات في حين أنه بالإضافة إلى ذلك لديه القدرة على البقاء داخل الغلاف الجوي. خلال هذه الدراسة ، تم الحصول على 19 سلالة بكتيرية من الفطريات الشعاعية لتحديد السلالات التي لها أكبر تأثير على تعزيز نمو النبات. أوضحت تجربة الصوبا أن نباتات القمح المعالجة بالفطر مدارية مقارنة مقارنة معايير نمو جيدة مثل طول الجذر وإطلاق النار ووزنه مقارنة مع نباتات المكافحة غير المحصنة.

الحُلمات الدالة: الغلاف الجُذرى، الفطريات الشعاعية، نمو النبات.



Figure (12): The effect of the strains against *fusarium oxysporum*.

## Factors affecting Rhizosphere colonization of tomato plant by plant growth promoting bacteria

العوامل المؤثرة في استعمار نبات الطماطم من خلال نمو النبات الذي يحفز نمو البكتيريا

#### Peter Adel Shawkey

#### 171081

Host place: Cairo University Research Park Internal Supervisor: Dr. Amgad Rady External Supervisor: Dr. Tarek Elsayed

## ABSTRACT

The goal of this study was to enhance or improve the colonization of rhizosphere of tomato plants by plant growth promoting bacteria. During this study, 12 bacterial strains were obtained from the rhizosphere of tomato. The greenhouse experiment indicated that the treatment with Ser, B63, E31 had shown good capacities for tomato root colonization. To improving the survival rate of tested bacterial isolates, micro- encapsulation techniques of rhizosphere microorganisms by sodium alginate and calcium chloride was conducted. The results indicated that both tested methods free bacterial cells as well as encapsulation technique are promising tools to be used as successful delivery methods of plant growth promoting bacteria. **Keywords:** Rhizosphere, plant growth promoting bacteria, greenhouse.

Eywords: Rhizosphere, plant growth promoting bacteria, greenhouse. كان الهدف من هذه الدراسة هو تعزيز أو تحسين استعمار الغلاف الجذري لنباتات الطماطم عن طريق نمو النباتات التي تعزز البكتيريا. تم خلال هذه الدراسة الحصول على 12 سلالة بكتيرية من جذور الطماطم. أشارت تجربة الدفيئة إلى أن العلاج مع Ser، B63، B31، أظهر قدرات جيدة لاستعمار جذر الطماطم. تم إجراء تقنيات التغليف الجزئي للكائنات الحية الدقيقة في ريزوسفير بواسطة ألجينات الصوديوم وكلوريد الكالسيوم. أوضحت النتائج أن كلتا الطريقتين المختبرتين للخلايا البكتيرية الحرة بالإضافة إلى تقنية التغليف هي أدوات واعدة لاستخدامها كطرق توصيل ناجحة لنمو النباتات التي تعزز البكتيريا.

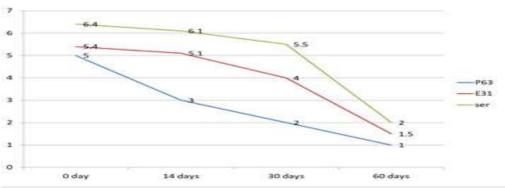


Figure (13): The survival rate of bacteria after had been encapsulated with sodium alginate and calcium chloride in order to improve the survival rate in the soil.

## **الكلمات الدالة:** الغلاف الجذّري، نمو النبات، الصوبا.

**Biotechnology: Agricultural** 

#### Determination of malachite green, crystal violet, and their metabolites in canned fish tissues by HPLC-MS/MS and its contribution in dietary intake

تحديد المالاخيت الأخضر و البنفسجى و مستقلباته في أنسجة الأسماك المعلبة باستخدام HPLC-MS/MS

#### Afaf Ayman Hussein



Host place: Central Laboratory of Residue Analysis of Pesticides and Heavy Metals in Food (QCAP) Internal Supervisor: Dr. Ahmed Aref External Supervisor: Prof. Lamiaa Ryad



Multiresidues of illegal dyes are found in canned products. This study evaluates malachite green (MG), crystal violet (CV) and naturally reduced form leucomalachite green (LMG) and leucocrystal violet (LCV). This evaluation was done on 30 different samples of canned fish tissues from various companies. Liquid chromatography mass spectrometry (LC-MS/MS) was the techniques used to determine MG, LMG, CV and LCV by C 18 column and Quick, Easy, Cheap, Effective, Rugged and Safe method (QuEChERS) using acetonitrile in extraction. The results were indicating that Egyptian local markets control the usage of MG, CV, LMG and LCV. In addition, it provides reliable data about the actual level of the contaminant limit. **Keywords:** malachite green, crystal violet, mass spectrometry.

تم العثور على العديد من الأصباغ غير القانونية في المنتجات المعلبة. تقيم هذه الدراسة اللون الأخضر الملكيت (MG) والبنفسج البلوري (CV) والأشكال المختزلة بشكل طبيعي من أخضر اللوكومالاشيت (LMG) والبنفسج الكريستالي (LCV). تم إجراء هذا التقييم على 30 عينة مختلفة من أنسجة الأسماك المعلبة من شركات مختلفة. كان مطياف الكتلة اللوني السائل (LC-MS / MS) التقنيات المستخدمة لتحديد MG و LOV و VC و LCV بواسطة عمود 18 C و باستخدام actionitie في الاستخراج. أظهرت النتائج أن الأسواق المحلية المصرية تتحكم في استخدام MG و CV و LMG و CM و VC بالإضافة إلى ذلك ، فإنه يوفر بيانات موثوقة حول المستوى الفعلي لحد التلوث. الكلوات الدالة، الملكيت الأخضر، البنغسجي البلوري، مطياف الكتلة.

Samples	Calculated concentration (µg/kg) of malachite green (MG)
Sample -2	0.02 μg/kg
Sample -3	0.06 µg/kg
Sample -4	0.05 µg/kg
Sample -5	0.04 µg/kg

Figure (14): Illustrate the concentration of the malachite green (MG).

Biotechnology: Food Biotechnology

ABSTRACT

## Nutritional value and health benefits of fermented soybean products

القيمة الغذائية والفوائد الصحية لمنتجات فول الصويا المخمرة

# Stiller

#### Maged Medhat Fakhry

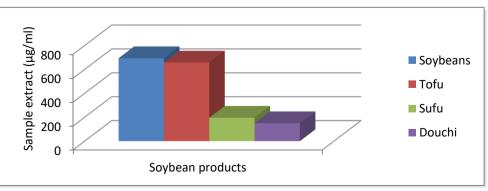
172535

Host place: Horticultural Research Institute, Biotechnology Lab Internal Supervisor: Dr. Ahmed Nada External Supervisor: Prof. Rania Ahmed Mahmoud

## ABSTRACT

Fermentation can improve the physicochemical and sensory quality of the soy products. The aim of this project is to determine whether fermentation will improve the quality of soybean products in terms of increasing digestibility, enhanced nutrition and increase the antioxidative activity, leading to enhanced health benefits. Commercial one non-fermented soybean product; Tofu, as well as two fungal fermented soybean products; Sufu and Douchi, in comparison with raw soybeans were tested. Glutamic acid was the most abundant amino acid. Fermentation reduced the Arginine content. Results showed that extracts of fermented soybean products exhibited selective cytotoxic activity towards Ehrlich Ascites Tumor (EAC) cells in a concentration-dependent manner. **Keywords:** soybean fermentation, bioactive peptides, nutritional value.

يمكن أن يعمل التخمير على تحسين الجودة الفيزيائية الكيميائية والحسية لمنتجات الصويا. الهدف من هذا المشروع هو تحديد ما إذا كان التخمير سيحسن جودة منتجات فول الصويا مما يؤدي إلى العديد من الفوائد الصحية. تم اختبار أنواع مختلفة من الصويا المخمرة و الغير مخمرة. كان حمض الجلوتاميك أكثر الأحماض الأمينية وفرة. قلل التخمير من محتوى الأرجينين. أظهرت النتائج أن مستخلصات منتجات فول الصويا المخمرة أظهرت نشاطا انتقائيا فى السمية للخلايا تجاه خلايا أورام استسقاء أورليك بطريقة تعتمد على التركيز.



**الكلمات الدالة**: تخمر فول الصويا ، الببتيدات النشطة بيولوجيا ، القيمة الغذائية.

Figure (15): In-vitro Cytotoxic effect of soybean products extract as expressed by 50% inhibition concentrations

#### **Biotechnology: Food Biotechnology**

Monitoring the levels of pesticides residues in unprocessed milk.

رصد مستويات بقايا المبيدات في الحليب غير المعالج

ABSTRACT



Shahd Emad Salah

#### 173449

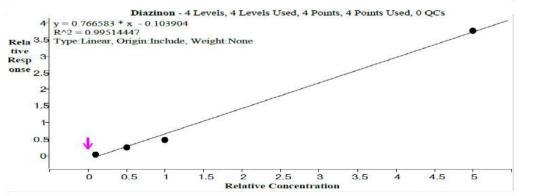
Host place: Central Laboratory of Residue Analysis of Pesticides and Heavy Metals in Food (QCAP) Internal Supervisor: Dr. Mohamed Maged External Supervisor: Dr. Ahmed Hassan Hamzawey



Milk represent one of the most signficatnt foods used in the worldwide. According to the food chain, various types of pesticides are exisiting in commercial milk. This projects aim is to determine the pestcides residues in unprocessed milk by using QuEChERS method on 30 samples colleced from diffrenet locations in Old Cairo. The results shows that majority of samples are -ve to pesticides, however; the minority are +ve to pesticides. Therefore; it's recommended to use pasteurized milk rather than unprocessed milk/ commercial milk. According to this study, the results confirm that many of pesticides ingredients are unstable as a result of milk processing during pasteurization process UHT (ultra-high temperature and pressure). **Keywords:** Pesticides, Symptoms, Unpasteurized milk.

هناك أنواع مختلفة من المبيدات الحشرية الموجودة في الحليب التجاري. يهدف هذا المشروع إلى تحديد بقايا المبيدات في الحليب غير المعالج باستخدام طريقة QuEChERS على 30 عينة مجمعة من مواقع مختلفة في القاهرة القديمة. وتبين النتائج أن غالبية العينات لا تختوي على مبيدات الآفات. الأقلية كانت إيجابية لمبيدات الآفات. وبالتالي؛ يوصى باستخدام الحليب المبستر بدلاً من الحليب غير المعالج / الحليب التجاري. وفقا لهذه الدراسة ، تؤكد النتائج أن العديد من مكونات المبيدات المبيدات الموق نتيجة لمعالجة

الكلمات الدالة؛ المبيدات، الأعراض، الحليب غير المبستر.





#### **Biotechnology: Food Biotechnology**

Incident of Nitrate and Nitrite in Egyptian Meat **Products.** 

نسبة النترات والنتريت في منتجات اللحوم المصرية

Mariam Samir Youssef

170165

Host place: Research Center of Poultry Disease Internal Supervisor: Dr. Haydan Mostafa External Supervisor: Dr. Hoda M. Al-Shimi

## ABSTRACT

The maximum permitted daily intake of nitrate and nitrite shouldn't exceed 3.7mg/kg and 0.07mg/kg of body weight respectively as established by the world health organization (WHO). Therefore, this study aims to determine the concentration of nitrate and nitrite levels in 50 different Egyptian meat samples obtained from different regions in Egypt using the HPLC, to determine the possible daily intake of nitrate and nitrite in meat and to calculate the hazard index to assess the risk that would arise from consumption of the Egyptian meat. The result exhibited that 48 out of 50 samples of meat contained nitrate, and only one sample (Bastrama) showed a concentration higher than the maximum concentration established by the Egyptian standards (ES). Moreover, only 14 out of 50 meat samples had nitrite.

Kevwords: Nitrates (No3). Nitrites (No2). meat. processed meat.

تهدف هذه الدراسة إلى تحديد تركيز مستويات النترات والنتريت في 50 عينة مختلفة من اللحوم المصرية التي تم الحصول عليها من مناطق مختلفة في مصر باستخدام HPLC ، لتحديد الكمية اليومية المحتملة من النترات والنتريت في اللحوم وحساب مؤشر الخطر لتقييم الخطر الذي قد ينشأ عن استهلاك اللحوم المصرية. أظِهرت النتائج أن 48 من 50 عينة من اللحوم تحتوى على نَترات ، وَّعينة واحدة فقط (البسترَّاما) أظهِّرت تركيزًا أُعلى منَّ الحد الأقصيَّ للتركيز الذيَّحَّددته المعايير المصرية (ES). علاوة على ذلك ، فإن 14 عينة فقط من أصل 50 عينة لحم بها تتريت. الكلمات الدالة: الّنترات، النيتريّت، اللحوم، اللحوم المصنعة.

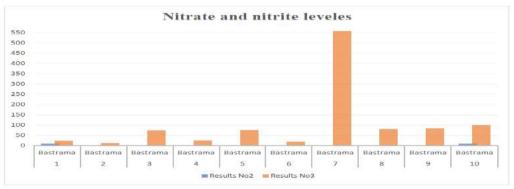


Figure (17): the concentration levels of nitrate and nitrite in bastrama ssamples

#### **Biotechnology: Food Biotechnology**

#### Evaluation of differences of sodium and potassium levels in umbilical cord blood plasma and fresh blood plasma in neonates

تقييم فروق مستويات الصوديوم والبوتاسيوم في بلازما دم الحبل السري وبلازما الدم الطازج عند الولادة

#### Amr Hassan Abd El-Fatah

171491





Host place: El Galaa Military Medical Center Internal Supervisor: Dr. Gehan Safwat External Supervisor: Dr. Aliaa Ibrahim Seif

## ABSTRACT

This research was intended to examine sodium and potassium in plasma of neonates and in cord blood. This approach was done by following, collection of umbilical cord blood, Auto Xpress Platform (AXP) automated system, flow cytometry procedure and kits, human umbilical cord plasma screening and storage, umbilical cord plasma preparation for evaluating sodium and potassium, fresh blood plasma extraction, Potassium and sodium evaluation, finally statistical analysis. This study showed very wide range of plasma sodium and potassium levels that seem to be abnormally high or low in cord blood and in healthy term neonate during first week of life but these are actually normal for that neonatal period depending upon gestational and post-natal age. **Keywords:** Plasma sodium, Plasma potassium, cord blood, homeostasis.

يهدف هذا البحث إلى فحص الصوديوم والبوتاسيوم في بلازما حديثي الولادة وفي دم الحبل السري، تم تنفيذ هذا النهج من خلال جمع دم الحبل السري، إجراء قياس التدفق الخلوي ومجموعات فحص وتخزين بلازما الحبل السري البشري، تحضير بلازما الحبل السري لتقييم الصوديوم والبوتاسيوم، استخراج بلازما الدم الطازجة وتقييم البوتاسيوم والصوديوم وأخيرا التحليل الإحصائي. أظهرت هذه الدراسة نطاقًا واسعًا جدًا من مستويات الصوديوم والبوتاسيوم في البلازما التي تبدو مرتفعة أو منخفضة بشكل غير طبيعي في دم الحبل السري وفي حديثي الولادة الأصحاء خلال الأسبوع الأول من الحياة. **الكلمات الدالة**: صوديوم البلازما ، بوتاسيوم المازما، دم الحبل السري الماري ال

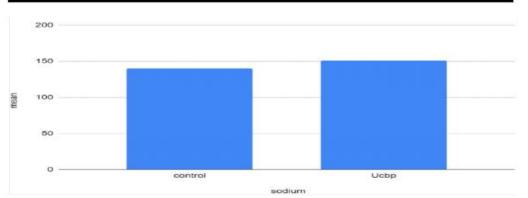


Figure (18): Histograms demonstrate sodium mean in control and umbilical cord blood plasma group

#### **Impact of Lnc-NOTCH1 in Chronic Idiopathic Thrombocytopenic Purpura**

تأثير Lnc-NOTCH1 في فرفرية نقص الصفائح الدموية المزمنة مجهولة السبب

#### Mahmoud Abdelfatah Mohammed



Host place: Medical Global Laboratories Internal Supervisor: Prof. Ayman Diab External Supervisor: Prof. Nashwa El Khazragy

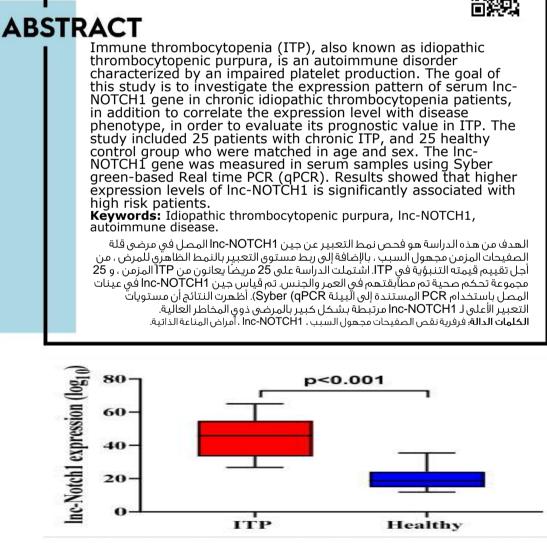


Figure (19): Boxplot graph illustrating a significant difference for the expression level of Inc-Notch1in chronic ITP

#### **Biotechnology: Medical**

#### Role of karyotyping in Acute Myeloid Leukemia (AML)

دور التنميط النووي في سرطان الدم النخاعي الحاد



#### Doha Khalid Elsayed

#### 170043

Host place: Genetica Lab Internal Supervisor: Dr. Haidan Mostafa External Supervisor: Prof. Yasser Elnahas & Prof. Fatma Elrefaey



Acute myeloid leukemia (AML) is a cancer of the myeloid line of blood cells, characterized by the rapid growth of abnormal cells that build up in the bone marrow and blood and interfere with normal blood cells. Thirty participants obtained according to WHO 2010 criteria were enrolled into the present study suffering from Acute Myeloid leukemia. chromosomes were analyzed using LUCIA Cytogenetics software. the results showed that all the participants with acute myeloid leukemia showed a change in the following parameters; The majority of them shows increase in pBBlast, BMBlast, and TIc, while it showed a decrease in hemoglobin and platelets count. Finally, most of the participants which were twenty-five having hepatosplenomegaly. **Keywords:** Cancer, AML, Karyotyping, Platelets, Bone marrow. It is a compared to the participant of the participants which were twenty-five having hepatosplenomegaly.

العظام. تم تسجيل ثلاثين مشاركًا تم الحصول عليهم وفقًا لمعايير منظمة الصحة العالمية 2010 في الدراسة الحالية، يعانون من سرطان الدم النخاعي الحاد. تم تحليل الكروموسومات باستخدام برنامج LUCIA Cytogenetics. أظهرت النتائج أن جميع المشاركين المصابين بسرطان الدم النخاعي الحاد أظهروا تغيرًا في المعايير التالية ؛ أظهرت الغالبية منها زيادة في pBBlast و BMBlast و Tlc ، بينما أظهرت انخفاضًا في عدد الهيموغلوبين والصفائح الدموية. أخيرًا ، كان معظم المشاركين يعانون من تضخم الكبد والطحال.

الكلماتُ الدالة؛ السرطان، سرطان الدم النخاعي، التنميط النووي، الصفائح الدموية، نخاع العظام.



Figure (20): Frequency of karyotyping among patients

#### **Biotechnology: Medical**

**ABSTRACT** 

#### A Comparative Study of Novel Chalcone Derivatives and Ethanolic Extract of Nerium Oleander as an Anticancer Agent Using Different Cancer Cell Lines.

دراسة مقارنة لمشتقات Chalcone الجديدة والمستخلص الإيثانولي من Nerium Oleander كعامل مضاد للسرطان باستخدام خطوط خلايا سرطانية مختلفة

#### Habiba Waleed Awad Hanafy



173991

Host place: Cairo University, Faculty of Science Internal Supervisor: Dr. Ahmed Nada External Supervisor: Prof. Emad Elzayat

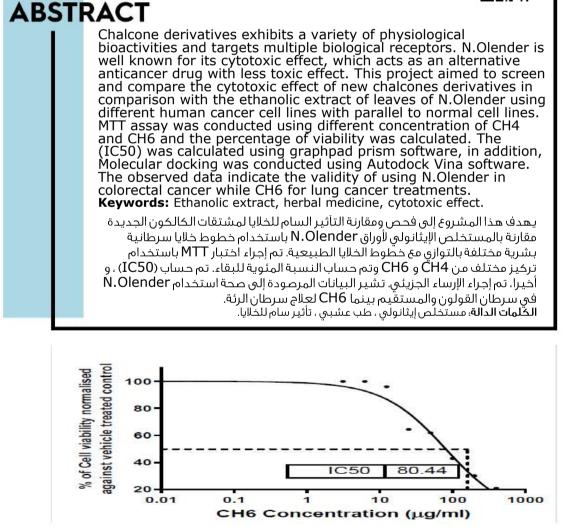


Figure (21): Cytotoxic effect and IC50 of chalcone (CN CH6) against lung cancer cells.

#### **Biotechnology: Medical**

# **Evaluation of antibacterial activity of chitosan-coated anisotropic silver Nanoparticles on different bacterial strains**

تقييم النشاط المضاد للبكتيريا لجسيمات الفضة النانوية متباينة الخواص المغلفة بالكيتوزان على سلالات بكتيرية مختلفة

#### Ahmed Saeed Abdelmonem



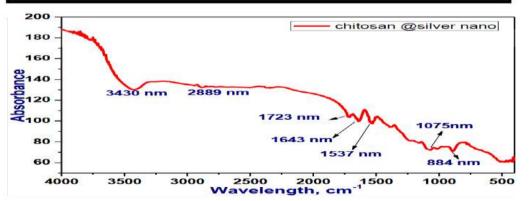
171835

Host place: Institute of Nanoscience and Nanotechnology Kafr El Sheikh University Internal Supervisor: Dr. Samer El Sayed External Supervisor: Dr. Ola El Borady

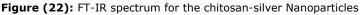


The present study explores the antibacterial activity of Chitosan NPs when it is coated with different concentrations of silver NPs. CS-AgNPs materials were synthesized by a simple chemical method. Nanoparticles were synthesized by chemical reduction method. The CS-Ag Nanoparticles was characterized using Fourier transform infrared spectroscopy (FTIR). Size and morphology was tested using atomic force microscopy (AFM). Crystalline and phase structure was tested using X-ray diffraction (XRD). CS-AgNPs antibacterial activity was assessed by measuring the inhibition zone when it was tested against different bacterial strains. The results have clearly indicated the interaction between chitosan and metallic surface of silver NPs which has led to effective stabilization of silver NPs on the chitosan polymer. **keywords**: Chitosan Nanoparticles, Silver Nanoparticles, antibacterial.

تستكشف الدراسة الحالية النشاط المضاد للبكتيريا في Chitosan NPs عندما تكون مغلفة بتركيزات مختلفة من NPs الفضة. تم تصنيع الجسيمات النانوية بطريقة الاختزال الكيميائي. تم تمييز الجسيمات النانوية CS – Ag باستخدام التحليل الطيفي بالأشعة تحت الحمراء. تم اختبار الحجم والتشكل باستخدام مجهر القوة الذرية. تم اختبار الهيكل البلوري والطور باستخدام حيود الأشعة السينية. تم تقييم النشاط المضاد للبكتيريا CS-AgNPs عن طريق قياس منطقة التثبيط عندما تم اختباره ضد السلالات البكتيرية المختلفة. أشارت النتائج بوضوح إلى التفاعل بين الكيتوزان والسطح المعدني للفضة مما أدى إلى استقرار فعال للفضة على بوليمر التفاعل بين الكليتوزان والسطح المعدني للفضة مما أدى إلى استقرار فعال للفضة على بوليمر الكيتوزان. الكلمات الدالة: جزيئات الكيتوزان النانوية ، جزيئات الفضة النانوية ، مضاد للجراثيم.



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**ABSTRACT** 

# Comparative study of novel synthetic cyanochalcone derivatives versus curcumin as antineoplastic agents

دراسة مقارنة لمشتقات السيانوكالكون الاصطناعية الجديدة مقابل الكركمين كعوامل مضادة للأورام



#### Anna Fatima Ynis

170007

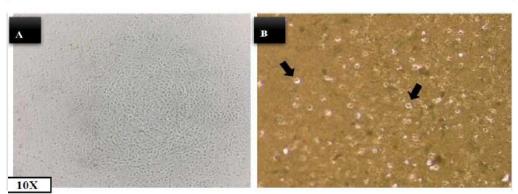
Host place: Cairo University, Faculty of Science Internal Supervisor: Dr. Amr Ageez External Supervisor: Prof. Emad El Zayat

# ABSTRACT

The present study was conducted aiming to screen in vitro the potential cytotoxic effects of a series of newly synthesized cyanochalcones versus that of the widely used natural compound curcumin. MTT assay was used to confirm the antiproliferative effects of cyanochalcone derivative 1 (CN ch1) and 5 (CN ch5) from the series of novel chalcones, against different types of cancer cell lines, in parallel with normal human lung cells; while dose response curves and IC50 were calculated. Molecular docking was then performed to understand molecular interactions of the synthetic compounds. Results showed that curcumin as a natural product has a higher promising anticancer activity than that of synthetic cyanochalcones, with highest sensitivity detected in HepG2 cell lines.

Keywords: Cyanochalcones, curcumin, chemotherapy, screening.

أجريت الدراسة الحالية بهدف فحص التأثيرات السامة للخلايا المحتملة في المختبر لسلسلة من السيانوكالكونز المُصنَّعة حديثًا مقابل تلك الموجودة في الكركمين. تم استخدام مقايسة MTT لتأكيد التأثيرات المضادة للتكاثر لمشتق السيانوكالكون 1 ضد أنواع مختلفة من خطوط الخلايا السرطانية. بالتوازي مع خلايا الرئة البشرية الطبيعية. تم حساب منحنيات الاستجابة للجرعة و IC50. تم إجراء الالتحام الجزيئي لفهم التفاعلات الجزيئية للمركبات الاصطناعية. أظهرت النتركمين كمنتج طبيعي له نشاط واعد مضاد للسرطان أعلى من تلك الموجودة في الكركمين الاصطناعي ، مع أعلى حساسية تم اكتشافها في خطوط خلايا HepG2. الكلمات الدالة. السيانوكالكونز. الكركمين العلام الكيميائي.



**Figure (23):** A represent negative control while B treated cells where the loss of epithelial shape is denoted by the arrows in figure B, indicating presence of cells with circular appearance.

# Assessment of pesticides residue in cosmetic henna sold in Egyptian local market

تقييم متبقيات المبيدات في الحناء التجميلية التي تباع في السوق المحلي المصري

#### Nagham Ayman Mahmoud

#### 170495

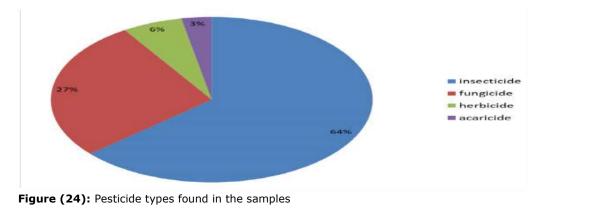
Host place: Central Lab of Residue Analysis of Pesticides and Heavy Metals in Food (QCAP) Internal Supervisor: Prof. Salwa Sabet External Supervisor: Dr. Sherif Elsafty



The current study aims to evaluate the composition and quality of 24 henna samples purchased from local markets in Cairo, Egypt to detect the pesticides found in each sample to determine if the pesticide residue levels exceed the permissible level or not based on the European regulation. The samples were processed using a technique called "QuECHERs" to extract the pesticide residue, then were analysed using liquid chromatography, and gas chromatography. The results showed that a total of 33 pesticide compounds were found in the samples; only 1 sample was free from pesticides, in 12 samples, pesticides were present in acceptable limits, while 11 samples exceeded the limit. **Keywords**: Pesticide residues. herbal plant. Equption henna.

تهدف الدراسة الحالية إلى تقييم وجود مبيدات في 24 عينة حناء تم شراؤها من الأسواق المحلية في القاهرة ، مصر للكشف عن المبيدات الموجودة في كل عينة لتحديد ما إذا كانت مستويات مخلفات المبيدات تتجاوز المستوى المسموح به أم لا بناءً على اللوائح الأوروبية. تمت معالجة العينات باستخدام تقنية تسمى "QUECHERs" لاستخراج بقايا المبيدات ، ثم تم تحليلها باستخدام الكروماتوجرافيا السائلة والكروماتوجرافيا الغازية. وأظهرت النتائج أنه تم العثور على إجمالي 33 مركب مبيد في العينات. كانت عينة واحدة فقط خالية من المبيدات ، في 12 عينة ، كانت المبيدات موجودة في حدود مقبولة ، بينما تجاوزت 11 يعينة الحد المسموح به.

**الكلمات الدالة:** بقايا مبيدات ، نبات عشبي ، حنة مصرية.



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ABSTRACT

#### Health Risk Assessment of Heavy Metals in Selected Personal Care Beauty Creams Purchased from Egyptian Local Markets

تقييم المخاطر الصحية للمعادن الثقيلة في كريمات تجميل تم شراؤها من الأسواق المحلية المصرية



#### Mira Maher Azmy

#### 172571

Host place: Central Lab of Residue Analysis of Pesticides and Heavy Metals in Food (QCAP) Internal Supervisor: Dr. Mohamed Maged External Supervisor: Dr. Mahmoud Ghonaim

回挖回

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## ABSTRACT

This study has been carried out to assess the level of heavy metals in Egyptian cosmetic products. Nineteen different brand products of beauty creams including all types of skin care creams, were analyzed to determine concentration of different types of heavy metals using quadruple inductively-coupledplasma mass spectrometer. The health risk exposure was evaluated for estimated weekly intake and the most of these elements are identified as potential impurities and known to be toxic. The results of the study show that the prolonged use of these products threat human health. Consequently, quality control is suggested to impose acceptable limits of contaminants in cosmetics.

Keywords: Heavy Metals, Cosmetics, Beauty Cream.

آجريت هذه الدراسة لتقييم مستوى المعادن الثقيلة في مستحضرات التجميل المصرية. تم تحليل تسعة عشر منتجًا مختلفًا من منتجات كريمات التجميل بما في ذلك جميع أنواع كريمات العناية بالبشرة ، لتحديد تركيز أنواع مختلفة من المعادن الثقيلة باستخدام مطياف كتلة البلازما الرباعي المقترن بالحث. تم تقييم التعرض للمخاطر الصحية من أجل المدخول الأسبوعي التقديري وتم تحديد معظم هذه العناصر على أنها شوائب محتملة ومعروفة بأنها سامة. تظهر نتائج الدراسة أن الاستخدام المطول لهذه المنتجات يهدد صحة الإنسان. وبالتالي ، يُقترح مراقبة الجودة لفرض حدود مقبولة للملوثات في مستحضرات التجميل.

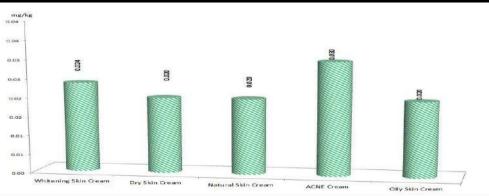


Figure (25): Mean concentration of arsenic in the 5 categories of beauty creams from different brands

#### **الكلمات الدُالة**: المعادن الثقيلة ، مستحضرات التجميل ، كريمات تجميلية.

**Biotechnology: Pharmaceutical** 

#### Preparation of activated carbon from natural plant waste

تحضير الكربون المنشط من مخلفات النباتات الطبيعية

**ABSTRACT** 



**Omar Hassan Ibrahim** 

#### 172279

Host place: Petroleum Research Institute Internal Supervisor: Dr. Samer El Sayed External Supervisor: Dr. Doaa Ibrahim & Dr. Renee Ibrahim

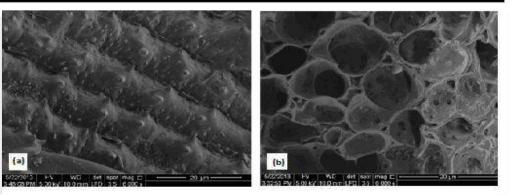


The abundant availability of agricultural wastes makes them good sources of raw precursors for preparation of low good activated carbons. This study aims at the preparation of activated carbon from pomegranate peel to be used as a low cost and eco-friendly bio adsorbent material. The activated carbon produced from pomegranate peel waste by chemical activation process with two type activating agents. The chemically activated carbons were characterized by measuring iodine and carbon yield percentage. The results obtained showed that the properties of (PP) has rich in elemental carbon content (45-55%), low ash content (2.5%), moisture (7.1%) and high volatile matter (75%) all this data are a pointer that it will give a high-quality activated carbon.

**Keywords:** Activated carbon, water treatment, agricultural wastes إن وفرة المخلفات الزراعية تجعلها مصادر جيدة للسلائف الخام لإعداد الكربون المنشط

أَلْمَنْحَفُضَ الجيد. تهُدُفَ هذه الدراسة إلَى تحضير الكربون الْمُنْشط منُ قُشَر الرمان لاستخدامه كمواد ماصة بيولوجية منخفضة التكلفة وصديقة للبيئة. تميز الكربون المنشط كيميائيا بقياس نسبة اليود ونسبة إنتاج الكربون. أظهرت النتائج التي تم الحصول عليها أن خصائص (PP) غنية بمحتوى الكربون الأولي (45–55٪) ، ومحتوى رماد منخفض (2.5٪) ، ورطوبة (7.1٪) ، ومواد متطايرة عالية (75٪). مؤشر أنه سيعطي الكربون المنشط عالي الحودة.

الحُلُمات الدالة؛ الكربون النشط، معالجة المياه، المخلفات الزراعية.



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Figure (26): SEM of PP (a) and PPAC (b)

#### **Eco-Friendly Bio-Lubricant Production from Waste Vegetable Oil and Its Application in Power Plant**

إنتاج زيوت التشحيم الحيوية الصديقة للبيئة من نفايات الزيوت النباتية وتطبيقاتها في محطة توليد

#### Tasnim Abdalla Gad Abdalla

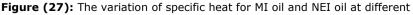


172051

Host place: Petroleum Research Institute Internal Supervisor: Dr. Amgad Rady External Supervisor: Dr. Doaa Ibrahim & Dr. Renee Ibrahim



#### ABSTRAC 'Eco-friendly" biodegradable waste vegetable oils can be used as an alternative for petroleum-based lubricant that can be applied at power plant. Natural ester insulating (NEI) oils are promising substitutes for mineral insulating (MI) oils. This work aimed to present the preparation of NEI oil. NEI oil produced by alkalinecatalyzed transesterification process of waste cooking oil for 2h at temperature 60 OC and stirring rate 400 rpm. The chemical compositions of the produced NEI oil were analyzed using gas chromatography. Based on the experimental result, chemical and electrical properties of final product which was NEI oil has been improved and almost fulfill requirements at a transformer insulating oil. Keywords: Eco-friendly insulating oil, lubricating oil, insulating oil. يمكن استخدام الزيوت النباتية القابلة للتحلل كبديل لزيوت التشحيم البترولية التى يمكن استخدامها في محطة توليد الكهرباء. تعتبر زيوت الإستر الطبيعية العازلة (NEI) بدائل واعدة لزيوت العّزل المعدني (MI). يهدف هذا العمل إلى تحضير زيت NEI. تم إنتاج زيت NEI بواسطة عملية الاسترة التحويلية القلوية المحفزة لنفايات زيت الطهى لمدة ساعتين عند درجة حرارة 60 درجة مئوية ومعدل التقليب 400 دورة في الدقيقة. تم تحليل التركيبات الكيميائية لزيت NEI المنتج باستخدام كروماتوجرافياً الغاز. بناءً على النتيجة التجريبية ، تم تحسين الخواص الكيميائية والكهربائية للمنتج النهائي وهو زيَّت NEI وكاد يغى بالمتطلبات في زيت عازل للمحول. الكلمات الدالة: أزيت عازل صديق للَّبِيئة ، زيت تشحيم ، زيت عازل. 3 2.5 pecific heat (J/Kg.K) MIoil - NEL oil 1 0 5 -20 20 40 60 80 100 120 0 Temprature (OC)



#### **Biotechnology: Environmental**

# Explore variability of local peach genetic resources for efficient breeding programs

استكشاف التنوع في الموارد الوراثية للخوخ المحلي من أجل برامج تلقيح فعالة

#### Nermin Ayman Mustafa

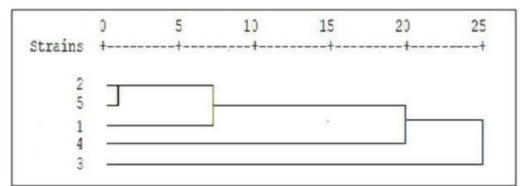
#### 172097

Host place: Horticulture Research Center Internal Supervisor: Dr. Amr Ageez External Supervisor: Prof. Rania Ahmed Mahmoud



The present study aimed to detect genetic variability and explore local peach genetic resources. Electrophoretic protein banding patterns and two enzyme profiles; peroxidase and Polyphenol Oxidase, randomly amplified polymorphic DNA-PCR and inter simple sequence repeat-PCR were used to assess the genetic diversity of five selected species, on basis of growth habits and flowering attitudes. One RAPD primer; D07, and two ISSR primers; HB10 and HB12, were tested. Based on the results of overall markers, only two of the five selected individuals were genetically identical to each other. Only one protein band was unique in one of the five selected individuals, while one peroxidase isozyme was not detectable only in the second individual. **Keywords:** Peaches, genetic variability, molecular markers.

تهدف الدراسة الحالية إلى اكتشاف التباين الجيني واستكشاف الموارد الوراثية المحلية للخوخ. تم استخدام أنماط ربط البروتين الكهربي واثنين من أنماط الإنزيم؛ بيروكسيداز وبوليفينول أوكسيديز، وتم تضخيم الجمض النووي بشكل عشوائي لتقييم التنوع الجيني لخمسة أنواع مختارة من الخوخ، على أساس عادات النمو و طريقة الإزهار. بناءً على نتائج العلامات الجينية، كان اثنان فقط من الأفراد الخمسة المختارين متطابقين وراثياً مع بعضهما البعض. كانت مجموعة بروتينات واحدة فقط فريدة من نوعها في واحد من الأفراد الخمسة المختارين، بينما لم يكن من الممكن اكتشاف أنزيم بيروكسيديز واحد فقط في الفرد الثاني. تم استخدام جميع البادئات الجينية بنجاح كأداة للبصمة الوراثية للنبات. الكلمات الحالة؛ تلوث المياه ، تحديد البكتيريا ، القولون الكلى ، القولون البرازي.



**Figure (28):** A dendrogram showing the genetic distance among the five seedy individuals of Sultani local peach strain using biochemical and molecular data.

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ABSTRACT

# Influence of exogenous application of proline and glycinebetaine on antioxidative system of salt-stressed basil plants

تأثير التطبيق الخارجي للبرولين والجليسينبيتين على النظام المضاد للأكسدة لنباتات الريحان المجهدة بالملح

#### Sherin Ibrahim Abdelgawad



Host place: Horticulture Research Center Internal Supervisor: Dr. Gehan Safwat External Supervisor: Prof. Hemat Sameh



# ABSTRACT

Salinity stress causes physiological and metabolic stress. It affects the chemical composition of the plant's leaves by reducing carbohydrates, proteins and minerals. Proline and glycine betaine increase in various plant as a natural defense mechanism against different abiotic stresses. This project aims to test the effect of the exogenous application of proline and glycine betaine in the improvement of basil plant growth under salinity stress. The height, the weight and branches number were compared. The chemical composition of the leaves' carbohydrate, proteins were tested. Different concentration of proline and glycine betaine were tested (50 mM ,100 mM ,200 mM). Results showed that best height, weight, and carbohydrate concentration were under 200 mM of proline and glycine.

proline and glycine. **keywords**: Basil, plant-stress, Proline, Glycine betaine. **Keywords:** Breast cancer, Biomarker, Tumor marker, MMP13, Early

detection

يهدف هذا المشروع إلى اختبار تأثير التطبيق الخارجي للبرولين والجليسين البيتين في تحسين نمو نبات الريحان تحت ضغط الملوحة. تم مقارنة الطول والوزن وعدد الفروع. تم اختبار التركيب الكيميائي لكربوهيدرات الأوراق والبروتينات. تم اختبار تركيز مختلف من البرولين والجليسين البيتين (50 ملي مولار ، 100 ملى مولار ، 200 ملى مولار). أظهرت النتائج أن أفضل طول ووزن وتركيز كربوهيدرات كان باستخدام 200 ملي مولار من البرولين والجليسين.

	Zero	NaCl 50 mM	NaCl 75 mM	NaCl 100 mM
Cont	58.6	50.21	46.46	40.61
P1	65.12	55.87	48.12	48.64
P2	66.54	58.82	54.12	51.54
P3	66.42	59.12	53.53	52.54
G1	64.76	52.09	49.91	48.11
G2	63.49	55.37	49.87	49.76
G3	65.46	60.73	54.65	53.87

الكلُمات الدالة: الريحانَ ، إجهاد النبات ، البرولين ، جلايسين البيتين.

Figure (29): Plant height (cm) of basil plants grown under saline conditions of irrigation as affected by proline and glycine betaine foliar applications

#### **Biotechnology: Agricultural**

# Detection of amount of Hydrogenated and trans fatty acids on fast and fried food surface

الكشف عن كمية الأحماض الدهنية المهدرجة على أسطح الأطعمة السريعة والمقلية

#### Mahmoud Mohsen Mohamed

#### 164539

Host place: Veterinary Medicine, Cairo University Internal Supervisor: Dr. Amr Ageez External Supervisor: Prof. Manal Zaki



Fast food is rich in trans-fatty acids which provided increase plasma concentrations of low-density lipoprotein cholesterol and reduce concentrations of high-density lipoprotein (HDL) cholesterol relative to the natural fat, increase in glucose concentrations and high pressure. This study aims to detect the hydrogenated and trans-fatty acids on the surface of various fast food by using HPLC and Gas Chromatography Assay. HPLC method was used for the determination of total trans-unsaturated fatty acid (trans) content and gas-liquid chromatographic method was used for determination of fatty acid composition of partially hydrogenated vegetable oils. Results revealed that trans content and fatty acid composition, of partially hydrogenated fats such as oils isolated from food products containing >5% trans fatty acids. **Keywords:** Cholesterol, Fast Food, Gas Chromatography. تهدف هذه الدراسة إلى الكشف عن الأحماض الدهنية المهدرجة والمتحولة على سطح

الوجبات السريعة المختلفة باستخدام HPLC وفحص كروماتوغرافيا الغاز. تم استخدام طريقة HPLC لتقدير إجمالي محتوى الأحماض الدهنية غير المشبعة (المتحولة) وطريقة الكروماتوغرافيا الغازية السائلة لتقدير تركيبة الأحماض الدهنية للزيوت النباتية المهدرجة جزئياً. أوضحت النتائج أن محتوى الدهون المتحولة وتكوين الأحماض الدهنية للدهون المهدرجة جزئياً مثل الزيوت المعزولة من المنتجات الغذائية تحتوي على > 5٪ أحماض دهنية متحولة.

الكلمات الدالة؛ الكوليسترول ، الوجبات السريعة ، كروماتوغرافيا الغاز.

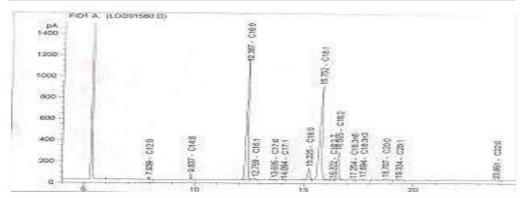


Figure (30): Separation of a standard mixture of fatty acids from mashed potato

ABSTRACT

#### A QuEChERS Based Liquid Chromatography Tandem Mass Spectrometry Method for the Determination of Hormones in Chicken

استخدام QuEChERS كطريقة لقياس الطيف الكتلى الترادفي القائمة على الكروماتوغرافيا السائلة لتقدير الهرمونات في الدجاج

#### **Mohamed Kamal Ahmed Fouad**

#### 175253

Host place: Central Lab of Residue Analysis of Pesticides and Heavy Metals in Food (QCAP) Internal Supervisor: Dr. Samer El-Sayed External Supervisor: Dr. Nermine Gad

# ABSTRACT

Hormones are chemicals that are secreted by the endocrine glands to the blood stream in order to achieve the stimulatory effect on various different types of cells. Therefore, some breeders use these growth hormones in the feed of chicken in order to stimulate their growth and increase meat and egg production of the chicken. The aim of this project is to determine whether hormones are present in the chicken meat using QuEChERS method and LC/MS-MS using high performance liquid chromatography and calculating the human exposure to the hormonal hazard. Therefore, 30 samples were collected and analyzed to determine the presence of hormonal residues in the meat using LC/MS-MS. There were no hormonal residues detected revealing free hormonal residues in the 30 samples. **Keywords:** Hormonal residues, LC/MS-MS, chickens' meat

يستخدم بعض المربين هرمونات النمو في علف الدجاج من أجل تحفيز نموها وزيادة إنتاج اللحوم والبيض للدجاج. الهدف من هذا المشروع هو تحديد ما إذا كانت الهرمونات موجودة في لحوم الدجاج باستخدام طريقة QuEChERS و MS-MS / NL باستخدام كروماتوجرافيا سائلة عالية الأداء وحساب تعرض الإنسان للمخاطر الهرمونية. لذلك تم جمع 30 عينة وتحليلها لتحديد وجود بقايا هرمونية في اللحوم باستخدام LC / MS-MS / NL. يتم الكشف عن أي بقايا هرمونية تكشف عن بقايا هرمونية حرة في 30 عينة. الكلمات الدالة: المخلفات الهرمونية , LC / MS-MS ، لحم الدجاج.

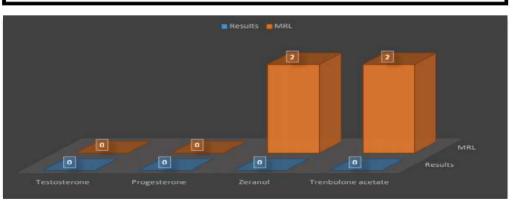


Figure (31): Showing the difference between the allowed MRL of the hormone and the results of the study.

#### **Biotechnology: Food Biotechnology**

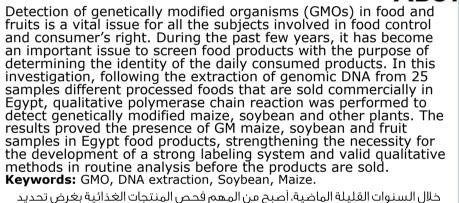
#### Screening of GMO in different food products and fruits

فحص الكائنات الحية المعدلة وراثيًا في المنتجات الغذائية والفواكه المختلفة

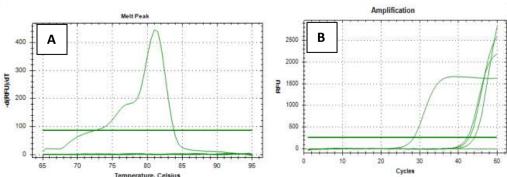


#### 172829

Host place: Cairo University Research Park (CURP) Internal Supervisor: Dr. Keham Mohsen External Supervisor: Dr. Hanaa Sherif



هوية المنتجات المستهلكة يوميًا. في هذه الدراسة، بعد استخراج الحمض النووي الجيني من 25 عينة من الأطعمة المصنعة المُختلفة التي تباع تجاريًا في مصر، تم إجراء تفاعل البلمرة المتسلسل النوعي للكشف عن الذرة المعدلة وراثيًا وفوَّل الصويا والنباتات الأخرى. اثبتت النتائج وجود عينات من الذرة وفول الصويا والفاكهة معدلة وراثيًا فى المنتجات الغذائية فى مصر ، مما يعزز ضرورة تطوير نظام قوى لوضع العلامات وطرق نوعية صالحة في التحليل الروتيني قبل بيع المنتجاتً. الكِّلمات الدالة؛ ألَكانُناتُ المعَّدلَةَ وراثيًا ، أستخراج الحمض النووي ، فول الصويا ، الذرة.



Temperature, Celsius

Figure (32): Real-time PCR amplification curve GMO-specific regions using primer pairs Bt11 for/ Bt11 rev for maize. (A): melting curve, (B): Amplification curve.





ABSTRACT

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#### Detection of the adulteration and commercial fraud with Pig meat and fat in the processed meat and chocolate stuff using Real Time PCR and chemical analysis

كشف الغش والاحتيال التجاري بلحوم ودهن الخنزير في اللحوم المصنعة ومنتجات الشوكولاتة باستخدام Real والتحليل الكيميائي

#### Mohamed Mostafa Shahin



Host place: Cairo University Research Park (CURP) Internal Supervisor: Dr. Gehan Safwat External Supervisor: Dr. Hanaa Sherif

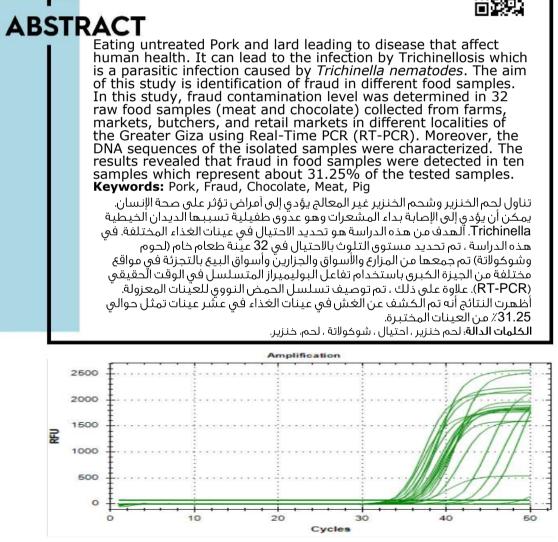


Figure (33): showing the amplification curve of the positive samples.

#### **Biotechnology: Food Biotechnology**

# FACULTY OF COMPUTER SCIENCE

#### GIS Utilization for MSA's Internet Coverage Evaluation استخدام نظم المعلومات الجغرافية لتقييم تغطية الإنترنت في MSA



Amal Khaled Hassan,

164021

# ABSTRACT

The rapid expansion of telecommunication infrastructure since Nigeria Communication Commission (NCC) issued the first telecommunication operating license, have necessitated the need for improved management strategies that aim to increase revenue while enhancing customer satisfaction. Geographic Information Systems is a tool for the capture, storing, manipulation, management, analysis and display of georeferenced information for the purpose of decision making. Recently, the geographic information systems have been used as a tool in telecommunication organizations such the NNC to make improved spatial decisions. GIS has wide range of usages that can improve human daily life. This project proposes to use the geographic information system to ensure well internet coverage at the MSA University. Selected object through it when put the cube on the selected object.

لقد استلزم التوسع السريع في البنية التحتية للاتصالات منذ أن أصدرت لجنة الاتصالات النيجيرية (NCC) أول رخصة تشغيل للاتصالات السلكية واللاسلكية ، الحاجة إلى استراتيجيات إدارة محسنة تهدف إلى زيادة الإير ادات مع تعزيز رضا العملاء. نظم المعلومات الجغر افية هي أداة لالتقاط وتخزين ومعالجة وإدارة وتحليل وعرض المعلومات ذات المرجعية الجغر افية لغرض اتخاذ القرار. في الأونة الأخيرة ، تم استخدام أنظمة المعلومات الجغر افية كأداة في منظمات الاتصالات مثل NNC لاتخاذ قرارات مكانية محسنة. لدى نظم المعلومات الجغر افية مجموعة واسعة من الاستخدامات التي يمكن أن تحسن الحياة اليومية للإنسان. يقترح هذا المشروع استخدام نظام المعلومات الجغر افية لضمان تغطية الإنترنت بشكل جيد في جامعة هي الكائن المحدد من خلاله عند وضع المكعب على الكائن المحدد

#### Cityfy: Big Data Solutions for a Smarter Cairo Assembly

سيتى فاى : إستخدام حلول البيانات الضخمة لتجمع أكثر ذكاءً في القاهرة

### Amr Ahmed Abdel Khalik

162665





In response to the ever changing and growing technological aspects of the world. I present my project offer of a software-intensive Smart Cit. The target being Egypt and its citizens. Cityfy is a Big data solution center that contains components that would improve the wellbeing of the users, and provide insight that could lead to newer stages of a greener city.

ستجابة للجوانب التكنولوجية المتغيرة والمتنامية في العالم. أقدم عرض مشروعي هو مركز Cityfy. كثيف البرامج. الهدف مصر ومواطنيها Smart Cit لبرنامج لحلول البيانات الضخمة يحتوي على مكونات من شأنها تحسين رفاهية المستخدمين ، .وتقديم نظرة ثاقبة يمكن أن تؤدي إلى مراحل جديدة من مدينة أكثر خضرة

# Detecting Fourier Transform for Epicycloids representation of an irregular shape

الكشف عن تحويل سلاسل فورييه لتمثيل Epicycloids لشكل غير منتظم



#### Kareem Gamal

170099

ABSTRACT



Begun in 1898, the Ptolemaic systems appeared and discovered the science of Epicycles in Ptolemaic astronomy and how multiple regular shapes like circles can provide representations of irregular shapes. The scientific goals highlight the benefits of the Epicycloid project, including that an image, object, person or animal can be represented using this science and have their extracted mathematical features as a descriptor for them. To generate descriptors at a better accuracy and optimization, this science needs to be further developed and generate a clear set of principles for approaching the extraction of these descriptor in terms of Epicycles

بدأت الأنظمة البطلمية في عام 1898 واكتشفت علم التدوير في علم الفلك البطلمي وكيف يمكن للأشكال المنتظمة المتعددة مثل الدوائر أن تقدم تمثيلات لأشكال غير منتظمة. تسلط الأهداف العلمية الضوء على فوائد مشروع Epicycloid ، بما في ذلك أنه يمكن تمثيل صورة أو كائن أو شخص أو حيوان باستخدام هذا العلم والحصول على ميزاتهم الرياضية المستخرجة كوصف لهم. لإنشاء واصفات بدقة وتحسين أفضل ، يحتاج هذا العلم إلى مزيد من التطوير وإنشاء مجموعة واضحة من المبادئ للتعامل مع استخراج هذه الواصفات من حيث الحلقات.

#### **Modelling a Quantum Circuit**

نمذجة الدوائر الكمية



#### Bishoy Kamal Gad Sharobim

163465

# ABSTRACT

We use classical computers every day in our lives and we can experience how beneficial they are. However, today's systems are getting more complex and problems are getting bigger than what classical computers can solve because it doesn't have the computational power necessary to solve it. [1] And at this point, a new concept appears which is quantum computers that can solve problems with big size and complexity in a very small time compared to classical computers. The scope of this project is on small size as one of the greatest problems in quantum computing is hardware, Most significant Quantum algorithms are implemented on small size problem's such as Shor's algorithms which is one of the greatest quantum algorithms that factorize numbers into its prime factors which solve a big problem in cryptography.

نحن نستخدم أجهزة الكمبيوتر الكلاسيكية كل يوم في حياتنا ويمكننا أن نختبر مدى فائدتها. ومع ذلك ، تزداد أنظمة اليوم تعقيدًا وتزداد المشكلات حجمًا مما يمكن أن تحله أجهزة الكمبيوتر التقليدية لأنها لا تمتلك القوة الحسابية اللازمة لحلها. [1] وفي هذه المرحلة ، ظهر مفهوم جديد وهو أجهزة الكمبيوتر الكمومية التي يمكنها حل المشكلات ذات الحجم الكبير والتعقيد في وقت قصير جدًا مقارنة بأجهزة الكمبيوتر الكلاسيكية. نطاق هذا المشروع على الحجم الصغير حيث أن الأجهزة هي واحدة من أكبر المشاكل في الحوسبة الكمية ، ويتم تنفيذ معظم خوارزميات الكم على مشاكل الحجم الصغير مثل خوارزميات شور التي تعد واحدة من أعظم الخوارزميات الكمية التي تحلل الأرقام في عواملها الأولية التي تحل مشكلة كبيرة في التشفير.

#### High Resolution Using Conditional Generative Adversarial Networks Classification

دقة عالية باستخدام شبكات الخصومة التوليدية الشرطية



Nouran Esmat Othman 173005

# ABSTRACT

Lately, High-resolution generators by deep learning methods have produced promising impressive results. In this thesis will be shown the implementation steps of the system objective. Which aims to recover a high-resolution from low-resolution image, it's considered as a classic computer vision issue. Through implementation it's going to build a generative opposing network called Conditional Generative Adversarial Network from deep learning approach, opposing network that applies the same concept to produce more photorealistic results in this architecture. Not only does it help zooming parts to correctly calculate their lost pixel after losing image resolution and remove the blurred parts, it also gives a multi-size approach that focuses on values and also improves reconstruction coherence in all image sizes.

في الآونة الأخيرة ، أنتجت المولدات عالية الدقة بأساليب التعلم العميق نتائج مبهرة. في هذه الرسالة سيتم عرض خطوات تنفيذ هدف النظام. والتي تهدف إلى استعادة دقة عالية من صورة منخفضة الدقة ، فهي تعتبر مشكلة رؤية الكمبيوتر الكلاسيكية. من خلال التنفيذ ، ستقوم ببناء شبكة معارضة مولدة تسمى شبكة الخصومة التوليدية الشرطية من نهج التعلم العميق ، معارضة الشبكة التي تطبق نفس المفهوم لإنتاج المزيد من النتائج الواقعية في هذه البنية. فهو لا يساعد فقط في تكبير الأجزاء لحساب البكسل المفقود بشكل صحيح بعد فقدان دقة الصورة وإزالة الأجزاء غير الواضحة ، بل إنه يوفر أيضاً نهجًا متعدد الأحجام يركز على القيم ويحسن أيضاً تماسك إعادة البناء في جميع أحجام الصور.

#### Human Pose Manipulation for Synthetic Actors

التلاعب فى وضع الإنسان للجهات الفاعلة الاصطناعية

#### Seif Allah Ayman

172237





Human pose manipulation is the controlling of a person's body in a static picture and making him do whatever poses or actions that we force on him. This makes it possible bring back old movie actors to new movies or even any person we are able to reach to be inside the movie and move his body as we want. In this project, we present how to achieve pose manipulation using deep learning. The project contains more than one deep learning model to solve different problems first like pose estimation as we need poses to force the person to do. We used minimal resources like a low resolution camera and not much computational power to achieve the pose manipulation.

التلاعب في وضع الإنسان هو التحكم في جسد الشخص في صورة ثابتة وجعله يفعل أي وضع أو أفعال نفرضها عليه ، مما يجعل من الممكن إعادة ممثلي الأفلام القدامى إلى أفلام جديدة أو حتى أي شخص يمكننا القيام به. الوصول إلى داخل الفيلم وتحريك جسده كما نريد ، نقدم في هذا المشروع كيفية تحقيق التلاعب بالوضع باستخدام التعلم العميق ، يحتوي المشروع على أكثر من نموذج تعليمي عميق لحل المشكلات المختلفة - مثل تقدير الوضع الذي نحتاجه. لإجبار الشخص على القيام بذلك ، استخدمنا الحد الأدنى من الموارد مثل الكاميرا منخفضة الدقة وليس لدينا الكثير من القوة الحسابية لتحقيق التلاعب في الوضع.

#### Smart Survivor Character in 3D Environment

الشخصية الناجية الذكية في البيئة ثلاثية الأبعاد



Nour El Deen Khaled Mahmoud

ABSTRACT

There are many approaches to use when it comes to 3D character's navigation. As for humans, the brain can act as a sensor to guide the person to move and explore environments. But in computer wise there are some search problems to help a 3D character explore and navigate a terrain. In this research, the method of using neural network mixed with genetic algorithm is applied to solve these problems. The neural network works on producing outputs and the genetic algorithm is responsible for enhancing the results. The results of the algorithms were verified with multiple environments.

هناك العديد من الطرق لاستخدامها عندما يتعلق الأمر بالتنقل بين الشخصيات ثلاثية الأبعاد. بالنسبة للبشر ، يمكن للدماغ أن يعمل كجهاز استشعار لتوجيه الشخص للتحرك واستكشاف البيئات. ولكن من منظور الكمبيوتر ، توجد بعض مشكلات البحث لمساعدة شخصية ثلاثية الأبعاد على استكشاف التضاريس والتنقل فيها. في هذا البحث تم تطبيق طريقة استخدام الشبكة العصبية الممزوجة بالخوارزمية الجينية لحل هذه المشاكل. تعمل الشبكة العصبية على إنتاج النواتج والخوارزمية الجينية مسؤولة عن تعزيز النتائج. تم التحقق من نتائج الخوارزميات في بيئات متعددة.

#### **Ride Sharing and Planning System**

تشخيص مرض باركنسون عن طريق الصور



#### Hassan Ezz

173081

# ABSTRACT

A lot of times people find it difficult to move from one place to another. That is why some companies tried to find a solution to these daily problems, however these companies could not solve many of these problems. As a student I thought of a suitable solution to eliminate these problems, through the use of smart phones and the exploitation of empty places in our car. The main idea of this project is studying the serve.areas.not.covered by a Public and Private transportation services in some regions, especially villages and countryside by adding new layer for Google maps, saving time for users, saving effort, decreasing crowded cars, determining the shortest path between the required places that users want to arrive, and investing more money for car owners

في كثير من الأحيان يجد الناس صعوبة في التنقل من مكان إلى آخر. لهذا السبب حاولت بعض الشركات إيجاد حل لهذه المشاكل اليومية ، إلا أن هذه الشركات لم تستطع حل الكثير من هذه المشاكل. كطالب فكرت في حل مناسب للقضاء على هذه المشاكل ، من خلال استخدام الهواتف الذكية واستغلال الأماكن الخالية في سيارتنا. الفكرة الرئيسية لهذا المشروع هي در اسة الخدمة .areas.not مغطاة بخدمات النقل العام والخاص في بعض المناطق وخاصة القرى والريف عن طريق إضافة طبقة جديدة لخرائط جوجل ، وتوفير الوقت للمستخدمين ، وتوفير الجهد ، وتقليل از دحام السيارات. ، وتحديد أقصر طريق بين الأماكن المطلوبة التي ير غب المستخدمون في الوصول إليها ، واستثمار المزيد من الأموال لأصحاب السيارات

#### **3D reconstruction of Multi-View Flat Sketches**

إعادة بناء ثلاثية الأبعاد للرسومات المسطحة متعددة العرض



Ahmed Fayez Hussein 170703

# ABSTRACT

We propose and implement a system for 3D reconstruction of flat sketches. Our system takes two sketches of two views of the shape as an input and outputs 12 corresponding multi view images with normal and depths maps. Architecture of the system is composed of two components which are Generator and Discriminator. Generator is responsible for generating the 12 images from the sketches while discriminator's objective is to fake images generated from generator and real images which are the targets. Generator succeed when it manages to fool discriminator into classifying generated images as real ones. Generating images is accomplished through two steps: (i) encoder which convert input sketches into a feature map representation, and (ii) decoder which map this feature representation into images. Discriminator is a linear classification convolutional network which classifies images as real or fake. Our system produced nearly perfect multi-view images from detailed and undetailed synthetic sketches, and from hand-drawn sketches.

نقترح وننفذ نظامًا لإعادة البناء ثلاثي الأبعاد للرسومات المسطحة. يأخذ نظامنا رسمين تخطيطيين لمشهدين للشكل كمدخلات ويخرج 12 صورة مناظرة متعددة العرض مع خرائط عادية وأعماق. تتكون بنية النظام من مكونين هما المولد والمميز. Generator مسؤول عن إنشاء 12 صورة من الرسومات بينما هدف أداة التمييز هو تزييف الصور التي تم إنشاؤها من المولد والصور الحقيقية التي هي الأهداف. ينجح المولد عندما يتمكن من خداع أداة التمييز لتصنيف الصور التي تم إنشاؤها على أنها صور حقيقية. يتم إنشاء الصور من خلال خطوتين: (1) المشفر الذي يحول رسومات الإدخال إلى تمثيل خريطة المعالم ، و (2) وحدة فك التشفير التي ترسم تمثيل هذه الميزة في صور. التمييز عبارة عن شبكة تصنيف تلافيفية خطية تصنف الصور على أنها حقيقية أو مزيفة. أنتج نظامنا المورام مثالية متعددة العروض تقريبًا من الرسومات الإصطناعية التفصيلية وغير المفصلة ، ومن الرسومات المرسومة يدويًا.

Computer Science: 3D Image

#### **Rigging Manager for Skeletal Mesh in 3D environment**

مدير لشبكة الهيكل العظمي في البيئة ثلاثية الأبعاد



Yahia Mahmoud Abdel Rahman 173269

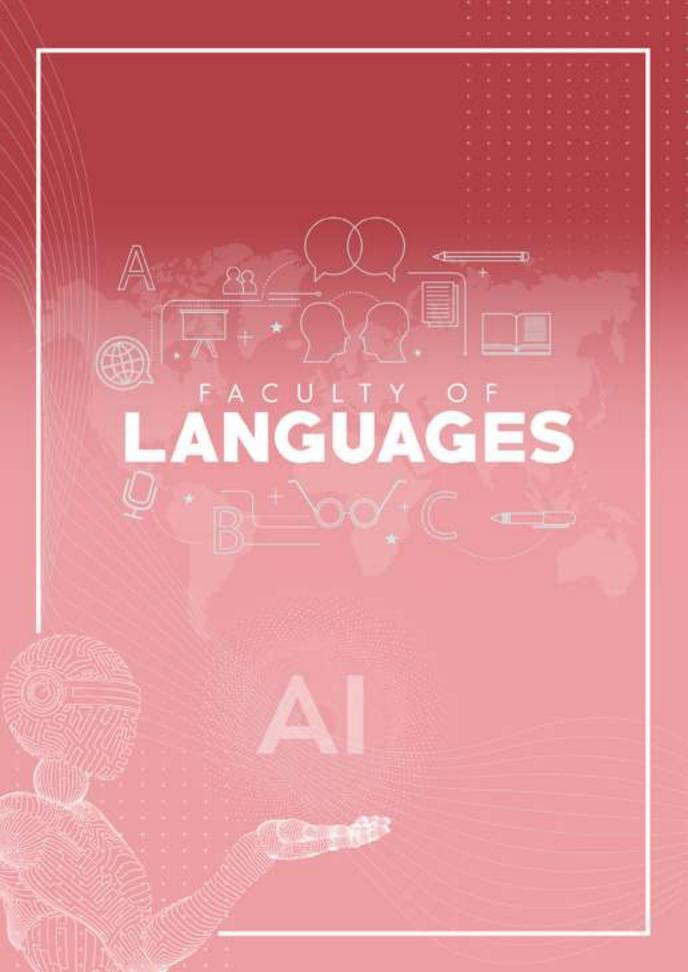




The main objective of this project: is to develop and implement the inverse kinematics algorithm. Then we will implement an algorithm for mapping two different models, where they may have not the same deformation system of bones. Then we will implement a smart algorithm that produce better results than the first level for the animation of the 3D model. Our first algorithm is FABRIK which is a heuristic method of inverse kinematics. FABRIK offers a very realistic poses and has low computational cost. Most of the multi component models, like hand, legged bodies like spiders, etc., are actually made up of several kinematic chains, and each chain typically has more than one end effector. We applied and tested FABRIK algorithm on 5 spheres that represent a chain of 4 bones, then we applied and tested it on a complex model like elephant. Then we found that the accuracy of the system on chain of length less than or equal to five is great as the movement of the chain with the existence of the pole is great and smoothly realistic, but with chain of length more than five, it is very good without the pole but with the pole the deformation of the model is damaged and produce unacceptable results. We think that our implemented system could be useful for some users. Users like designers, animators and it may be beneficial for freelancers and for small businesses.

الهدف الرئيسي من هذا المشروع : هو تطوير وتنفيذ خوارزمية الحركة العكسية. ثم سنقوم بتنفيذ خوارزمية لرسم خريطة لنموذجين مختلفين ، حيث قد لا يكون لديهم نفس نظام تشوه العظام. ثم سنقوم بتنفيذ خوارزمية ذكية تنتج نتائج أفضل من المستوى الأول للرسوم المتحركة للنموذج ثلاثي الأبعاد. أول خوارزمية لدينا هي FABRIK وهي طريقة إرشادية للحركية العكسية. تقدم FABRIK أوضاعًا واقعية للغاية وتكلفة حسابية منخفضة. تتكون معظم النماذج متعددة المكونات ، مثل أجسام اليد والأرجل مثل العناكب ، وما إلى ذلك ، من عدة سلاسل حركية ، وعادة ما تحتوي كل سلسلة على أكثر من مؤثر طرفي واحد. طبقنا واختبرنا خوارزمية كما من مؤثر الحتير ناها على نموذج معقد مثل الفيل. ثم وجدنا أن دقة النظام على سلسلة من 4 عظام ، ثم طبقناها واختبر ناها على نموذج معقد مثل الفيل. ثم وجدنا أن دقة النظام على سلسلة طولها أقل من خمسة أو تساويها كبيرة حيث أن حركة السلسلة مع وجود القطب رائعة وواقعية بشكل سلس ، ولكن مع سلسلة أطوال أكثر من خمسة ، فهي جيد جدًا بدون القطب ولكن مع القطب يكون تشوه النموذج تالفًا وينتج عنه نتائج غير مقبولة. نعتقد أن نظامنا الذي تم تنفيذه قد يكون مي المي يوان مع مع المية أطوال أكثر من خمسة ، فهي جيد جدًا بدون القطب ولكن مع القطب يكون تشوه النموذج تالفًا وينتج عنه نتائج غير مقبولة. نعتقد أن نظامنا الذي تم تنفيذه قد يكون مفيدًا لبعض المستخدمين. يحب المستخدمون نتائج غير مقبولة. نعتقد أن نظامنا الذي تم تنفيذه قد يكون مفيدًا لمعض المستخدمين. يحب المستخدمون

- 174 - Computer Science: Computer Animation



Feminism in Retrospect: How Queer Representation in Literature Reinforces Feminism. A Psychoanalytic Feminist Comparative Study into Virginia Woolf's 'Orlando: A Biography' and Oscar Wilde's 'The Picture of Dorian Gray"



Donia Mohamed Gamila







Feminism mainly is concerned with fighting patterns of gender inequality, in order to funnel down these general patterns into a causative concentrate that would help touch on the fundamental cause of female subordination. By utilizing psychoanalysis from a feminist perspective, this paper presses the direct relationship between feminism and queer theory; and proves through the looking glasses of Freudian and Lacanian Psychoanalysis how queer characters in literature; such as, 'Orlando' as a transgender character and Wilde's three homosexual male protagonists, can reinforce feminism and negate the validity of gender inequality.

. من خلال إستخدام التحليل النفسى بمنظور نسوى هذة الدراسة ستقوم بالقاء الضوء و التركيز على النسوية والنظرية "الكويرية" استناداً على مناهج التحليل النفسى لكلاً من فرويد و لاكان، حول كيفية تصوير الشخصيات "الكويرية" فى الأدب من خلال شخصيات مثل أورلاندو المتحول جنسياً و الثلاث ابطال مثلين الجنس الذى قدمهم وايلد فى "صورة دوريان غراى "بمقتضى ذلك يمكن تعزيز النسوية و دحض صحة التميز بين الجنسين. A Self Beyond Spatial Terms: A Comparative Approach to the Faces of Nubian and Dominican Diaspora in Idrīs Ali's *Dongola* and Julia Alvarez' How the García Girls Lost Their Accents



Reem Montasser Haqqi





# ABSTRACT

While diaspora is a common experience that many nations undergo for varied, inevitable reasons: retaining one's identity on foreign lands is a personal choice of integrity and loyalty to one's homeland and origins. The aim of the thesis is to comparatively study the diaspora experience in the novels Dongola by Idris Ali and How the García Girls Lost Their Accents by Julia Alvarez—with the Dominican-American Yolanda and the Nubian-European Awad Shallali as the characters in focus. The thesis explores Bhabha's notion of hybrid identities' unhomeliness, Berry's fourfold model of acculturation. and Du Bois' theory of double consciousness. The findings conclude that both Yolanda and Shallali initially share a gnawing unhomeliness as they fail to belong to either their original culture or the foreign one, hence why both adopt different acculturation techniques to overcome their alienation.

من خلال التحليل الدقيق لشخصية الدومينيكية الأمريكية (يولاندا) والنوبي الأوروبي (عوض شلّالي)، تطبق الأطروحة مفهوم (هومي بابا) حول الهوية الهجينة وبقائها عالقة بين الثقافات، بالإضافة إلى النموذج الرباعي لـ(جون بيري) حول تقنيات التثاقف، وأخيرًا نظرية (دو بوا) للوعي المزدوج. تُشير النتائج إلى أن كُلَّا من (يولاندا) و(شلالي) توافقان في البداية في عدم انسجامهما مع ثقافتهما الأصلية والأجنبية، ما دفعهما لتبني تقنيات مختلفة للتثاقف بهدف التغلب على اغترابهما، وفي نهاية المطاف تتقبل (يولاندا) وعيها المزدوج وثنائيتها الثقافة، موقت تناغم بين جانبيها الدومينيكي والأمريكي؛ بينما يعزز (شلالي) هويته الأوروبية ويقطع صِلاته بأصله النوبي والعربي.

Languages: Comparative Literature

Echoes of Narcissus in Modern Literature: A Psychoanalytic View of Narcissistic Characters in D.H. Lawrence's *Sons and Lovers* and Gustave Flaubert's *Madame Bovary* 

choes of Narcissu



Mariam Mostafa A. I. Elsherif

# ABSTRACT

In modern literature psychology and psychoanalytic approaches became a matter of interest for many modern writers, especially after the emergence of Freud's psychoanalytic approaches and theories at the beginning of the 20<sup>th</sup> century. One of the psychoanalytic terms which are quite useful in the analysis of modern literary works is 'narcissism'. The aim of the study is to explore how self-centeredness and selfishness as a human trait and their destructive consequences on both the society and the individual are reflected in Greek mythology and translated in literature. The study suggests that narcissism as a psychological trait that affects behavior and relationships is a universal concern that is tackled in literature. D.H. Lawrence's Sons and Lovers and Gustave Flaubert's Madame Bovarv are considered remarkable modern works, presenting complex, narcissistic characters which could be a rich psychoanalytic material for literary analysis. Thus, Characters like Emma Bovary, Gertrude Morel and Paul Morel see nothing in the mirror of life except their own reflection.

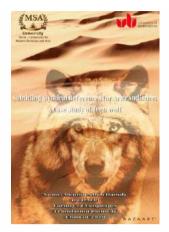
هذة الدراسة تتطرق للنرجسية كسمة نفسية ذات تأثير واضح على سلوك الفرد و علاقاتة حيث تناولها الأدب كقضية إنسانية. تعد الروايتين "أبناء و أحباء" لديفيد هربرت لورانس و "السيدة بوفارى" لجوستاف فلوبير من روائع الأدب الحديث حيث ان هذين العملين يقدمان شخصيات نرجسية شديدة التعقيد مما يفسح مجالا واسعاً للتحليل النفسى والأدبى. بنائاً على ذلك شخصيات مثل إيما بوفرى و جرترود موريل و بول موريل لا يرون شىء فى مرآة الحياة سوى انعكسات لصورهم.

#### Subtitling Mythical References for Arab Audience: A Case Study of *Teen Wolf*



Mennat Allah H. M. Elshanawany





# ABSTRACT

One of the most common problems that translators face when attempting interlingual subtitling is the translation of culturally-bound expressions. Accordingly, this paper attempts to examine the strategies adopted in subtitling from English into Arabic by analyzing the mythical elements exhibited in the American TV series Teen Wolf. The conducted analysis heavily draws upon the subtitling strategies proposed by Pedersen (2005). The paper also seeks to evaluate which strategies are used most frequently and why. Retention, in naming mythical creatures, and Direct Translation, in rendering other references, are used the most in the show. It is concluded that Direct Translation is the most effective strategy in subtitling references to mythology as it produces a clear, unobtrusive target text (TT), easy for the audience to grasp smoothly.

يدرس هذا البحث الإستراتيجيات التي اتبعت لتخطي تلك الفجوات الثقافية لتوفير ذات المتعة التي يحظي بها الناطقون بالإنجليزية (الجمهور الأصلي) لأولنك الناطقون بالعربية (الجمهور المستهدف). وكما ينص بيدرسن (2005)، كما يسعى البحث لتقييم أي إستراتيجيات استخدمت أكثر والسبب وراء ذلك. الاستبقاء في تسمية الكاننات الأسطورية والترجمة المباشرة في ترجمة الإشارات الأخرى هما أكثر إستراتيجيتين مستخدمتين في المسلسل. ويستخلص أن الترجمة المباشرة هي أكثر الإستراتيجيات فاعلية في ترجمة الإشارات للأساطير حيث ينتج عنها نص واضح وسلس ويسهل على الجمهور فهمه.

#### The Representation of Women in the Holy Quran: A Gender and Linguistic Approach to Five Translations



Salma Aiman Mohamed

# **ABST**RACT

The Holy Qur'an is a universal text to all mankind; thus, they require a translation in order to understand this holy text. A topic which receives major criticism in today is the representation of women in Islam. This is a qualitative and quantitative study that uses content analysis and comparison as tools of analysis. This study aims to explore the representation of women in the Quran, through five translations of male and female translators, by applying Andrew Chesterman's semantic translation strategies, in order to have a better understanding of the effect of the translator's gender on the text. It concluded that out of the five translations, only Saheeh International's translation remained unaffected by its translators' gender.

تهدف هذه الدراسة إلى إستكشاف تمثيل المرأة في القرآن في خمس ترجمات لذكور وإناث، من خلال تطبيق نظرية استراتيجيات الترجمة الدلالية لأندرو تشيسترمان، لأجل معرفة مدى تأثير جنس المترجم على النص. وخلصت الدراسة أن من الترجمات الخمس، ترجمة صحيح الدولية هي الوحيدة التي لم تتأثر بجنس مترجميها.

#### The Translation of "Dr. Jekyll and Mr. Hyde" for Adults and Children: An Application of the Polsystem Theory



Hanaa Moustafa K. Moustafa





# ABSTRACT

Despite the evolution in translation studies, the controversy over translating foreign cultural concepts in literature continues to represent a problem in the 21<sup>st</sup> century. There are significant differences and gaps between the strategies that are employed in translating for adults and for children. Therefore, this paper aims to examine the Arabic translation of the English novel "Dr. Jekyll and Mr. Hyde" (1886), by Robert Louis Stevenson, for adults, by Julan Hagi (2008), and for children, by Fayga Gerges Hanna (2012), through applying the Even-Zohar's and Zohar-Shavit's Polysystem theory. The study takes into consideration the polysystems of both cultures and type of audience. This qualitative research employs content analysis and analytical comparison to interpret the reason behind employing different strategies in translating the novel for children and adults, evaluate the adequacy of the strategies, and propose solutions to fill translation gaps by maintaining appropriateness and transferring the source culture.

يعتمد هذا البحث النوعي على تحليل المضمون والمقارنة التحليلية لتفسير سبب لجوء المترجمان لاستراتيجيات مختلفة للفنتين من القراء ولتقييم الترجمتين بناءً على دقتهما وكفائتهما ولطرح حلول لسد ثغرات وتصحيح أخطاء الترجمة، وتهدف تلك الحلول إلى الحفاظ على ملائمة الترجمة لفنتي القراء وثقافتهم بالإضافة إلى نقل الثقافة الأصل/المصدر، وتوضح الدراسة أن سيادة اللغة والثقافة الأصل تتمثل في أغلب الترجمات للكبار وينعكس ذلك في صورة ترجمة حرفية، ولكنها تنعدم في أغلب ترجمات الأطفال، ويتضح ذلك في حذف أو تعديل المفاهيم الثقافية للنص الأصلي، أما هذة الدراسة توصي باستخدام كلتا استراتيجيتي الترجمة في كلا النصين لتجنب الأخطاء اللغوية في ترجمة الكبار الحرفية وللحفاظ على ملائمة النص للأطفال ونقل الثقافة الغربية مما يعزز التنوع الثقافي للأطفال.

Languages: Transaltion

Comparing EFL Listening and Writing Skills of Egyptian General Secondary Education Graduates vs. IGCSE Graduates: Lessons and Implications

Lauverbity of

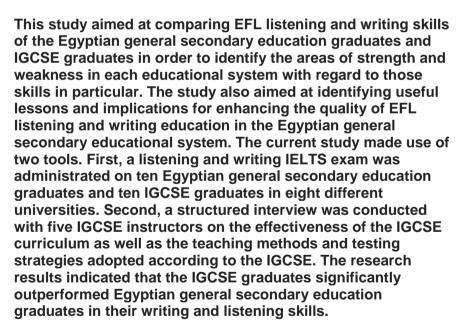
Comparing EFL Listening and Writing Skills of Egyptian General Secondary Education Graduates vs. IGCSE Graduates: Lessons and Implications

Hoda Hesham



Hoda Hesham Mohamed

# ABSTRACT



تهدف هذه الدراسة إلى مقارنة مهارات الاستماع والكتابة باللغة الإنجليزية كلغة أجنبية لخريجي التعليم الثانوي العام المصري وخريجي التعليم الثانوي البريطاني IGCSE وذلك من أجل تحديد نقاط القوة والضعف في كل نظام تعليمي فيما يتعلق بتلك المهارات علي وجه الخصوص. هذه الدراسة تهدف أيضًا إلى تحديد الدروس المفيدة والآثار المترتبة وذلك لتحسين جودة تعليم مهارات الاستماع والكتابة باللغة الإنجليزية كلغة أجنبية في نظام التعليم الثانوي العام المصري.

Languages: TEFL

Investigating Faculty of Languages Students' Perceptions of the Applicability of Digital Storytelling in Enhancing their Creative Writing Skills (A Case Study at MSA University)



Eman Ali H. Elsharazly





# ABSTRACT

This study aimed at examining how far digital storytelling (DST) can enhance Faculty of Languages students' creative writing skills. It also aimed at identifying the opportunities that digital storytelling can offer to develop these students' creative writing and the challenges that they might face while implementing such a technique. The means of the research was a seven-question questionnaire that was designed by the researcher and was answered according to the study participants' perceptions. The study findings revealed that the lack of time and the lack of proper training in how to write creatively were the major challenges that students might face. The study also revealed that DST was applicable to an extent. Moreover, it was found that that offering free training workshops in implementing DST and suggesting more interesting real-life topics to write about can enhance the effectiveness of DST.

هدفت هذه الدراسة إلى فحص مدى قدرة رواية القصص الرقمية على تعزيز مهارات الكتابة الإبداعية لطلاب كلية اللغات. كما أنها هدفت أيضا إلى تحديد الفرص التي يمكن أن تقدمها رواية القصص الرقمية لتطوير الكتابة الإبداعية لهوّلاء الطلاب والتحديات التي قد يواجهونها أثناء تنفيذ مثل هذه التقنية. كانت وسيلة البحث عبارة عن استبيان مكون من سبعة أسئلة صممه الباحث وتمت الإجابة عليه وفقا لتصورات المشاركين في الدراسة. كشفت نتائج الدراسة أن التحديات الرئيسية التي قد يواجهها الطلاب هي ضيق الوقت وقلة التدريب المناسب على كيفية الكتابة الإبداعية. وكشفت الدراسة أيضا أن رواية القصص الرقمية قابلة للتطبيق إلى حد ما.

Languages: TEFL

An Investigation of In-Class Challenges Faced by Novice English Teachers (A Case Study of Egyptian National and International Schools)



Faridah El Saeed M. El Saeed



# ABSTRACT

When trainee teachers complete their pre-service programs and no longer receive the guidance of their trainer, they are faced with the real life experience of being a novice teacher in a classroom with no guidance which, in turn, creates considerable challenges that they face. This research paper aims at investigating the challenges faced by novice EFL teachers in their early years in the teaching field and whether the teachers who work in the international section face the same challenges of those who work in the national section or not. The study has revealed that 1. The challenges faced by most teachers are classroom management, lack of technological facilities and addressing distinctive student needs. 2. It was recommended that novice teachers must attend training sessions in classroom management and training sessions to raise the professional and pedagogical competencies.

تهدف هذه الورقة البحثية إلى التحقيق في التحديات التي يواجهها مدرسو اللغة الإنجليزية كلغة أجنبية المبتدئين في سنواتهم الأولى في مجال التدريس وما إذا كان المعلمون الذين يعملون في القسم الدولي يواجهون نفس التحديات التي يواجهها أولئك الذين يعملون في القسم الوطني أم لا.

Languages: TEFL

The impact of working conditions on the turnover intention of the pharmaceutical - sales representatives in the Egyptian pharmaceutical organization Global NAPI Pharmaceuticals (GNP)



Christhine Eryan Gendy





## ABSTRACT

This research aims to examine the relationship impact of working conditions which are long working hours, workplace and workload on the turnover intentions in the Egyptian Pharmaceutical industry through GNP company. This research is essential for the pharmaceutical companies to explore the impact of the working conditions on its employees' turnover intentions to establish a plan enhancing healthy working conditions to the employees' intention to leave. This research finds that there is a positive relation between working conditions and turnover intentions.

يهدف هذا البحث إلى دراسة تأثير العلاقة بين ظروف العمل التي تتمثل في ساعات العمل الطويلة ومكان العمل وعبء العمل على نوايا ترك موظفين المبيعات العمل في مجال صناعة الأدوية المصرية عن طريق شركة GNP.

## The Impact of Job Dissatisfaction on Employee's Engagement



Omnia Mahmoud Ali Naiemy

## **ABST**RACT



DISSATISFATION ON EMPLOYEES ENGAGMENT

Omnia Mahmoud Ali 170285



The purpose of this study is to detect the effect of job dissatisfaction on employee's engagement. This paper was a quantitative design, as the researcher used a specific tool to gather information through with is questionnaires. The study's results found that there is no impact of job dissatisfaction on employee's engagement. The results of this study revealed that it is totally different from the studies that were conducted in the literature review. My study showed that, there is no impact of dissatisfaction on employee's engagement. However the results in the literature review highlighted that there is an impact of job dissatisfaction on employee's engagement.

الغرض من هذه الدراسة هو الكشف عن تأثير عدم الرضا الوظيفي على مشاركة الموظف. كانت هذه الورقة تصميمًا كميًا ، حيث استخدم الباحث أداة محددة لجمع المعلومات من خلال الاستبيانات.

Languages: Executive Skills

## Impact of training and development on employee's performance



Sohaila Amr Mohamed

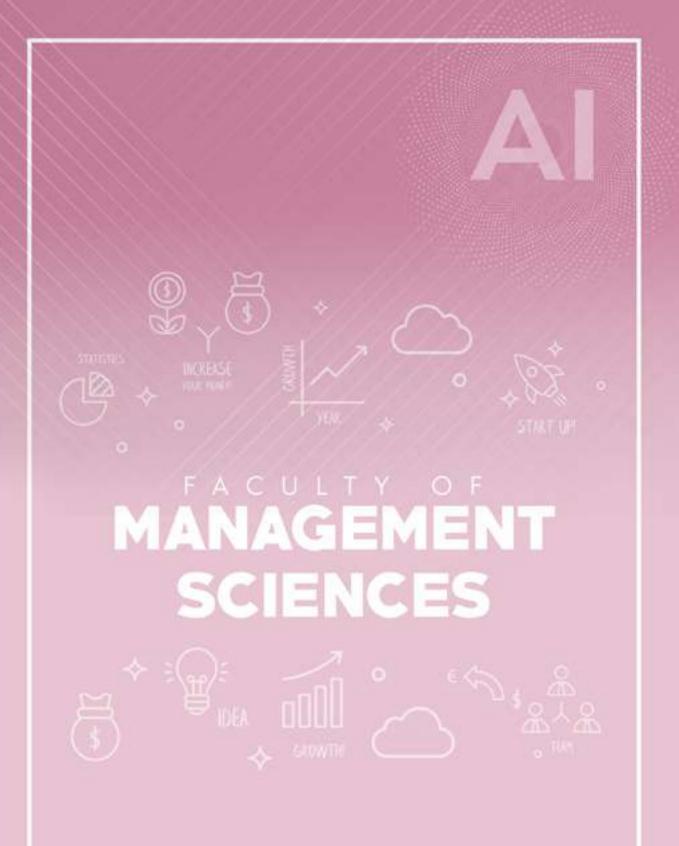




## ABSTRACT

This descriptive research paper main objective was to examine the impact of training and development on employees' performance. The paper conducted through the pilot study that employees in the selected company attend the training process once a year and they want it to be more than one time a year. The methodology of the paper is questionnaire that. The data were analyzed and discussed. The hypothesis is tested, the regression is detected, and the R square is 0.8. The results proved that there is a strong impact of training and development on employees' performance. Relevant literature review is studied in this research paper related to the impact of training and development on employees' performance and their results compared with this research paper. Recommendations and conclusion are presented in the last chapter of the research paper.

كان الهدف الرئيسي لهذا البحث هو فحص تأثير التدريب والتطوير على أداء الموظفين. الورقة التي أجريت من خلال الدراسة التجريبية أن الموظفين في الشركة المختارة يحضرون عملية التدريب مرة واحدة في السنة ويريدون أن تكون أكثر من مرة في السنة.



#### The Impact of Green Accounting on Firm Performance

#### Supervisor: **Dr. Mahmoud El-Ghazaly**



Ahmed Roshdy 171041



Rodanya Mohamed Myrna Medhat 170231



173777



Sarah Mohammed 171275



## ABSTRACT

This project investigates the relationship between Green Accounting and Firm Performance using ROCE. The data was gathered from financial statements and annual reports. The sample will be 27 companies from the industrial sector from period 2014 to 2018. Still, the data will be analyzed through Descriptive, Correlation and Regression analysis using statistical program called SPSS. In this research, the used sample was 27 European countries in the industrial sector. The data was obtained from financial statements and annual reports using the official website of the companies from 2014 to 2018. The variables have been analyzed using descriptive, correlation, and regression analysis using the SPSS program.

يبحث هذا المشر وع في العلاقة بين المحاسبة البيئية و أداء الشركة ، وتم جمع البيانات من البيانات المالية والتقارير السنوية. تتكون العينة من 27 شركة من القطاع الصناعي من الفترة 2014 إلى والانحدار باستخدام 2018SPSS. وتم تحليل البيانات من خلال التحليل الوصفي والارتباط برنامج إحصائى يسمى

Management sciences: Accounting

#### The Effect of Capital Adequacy and Non-Performing Loans on Liquidity: Toward Basel III

#### Supervisor: Dr. Mahmoud El-Ghazaly



Sherouk Mamon 171871





Merna Victor 174099



Mohamed Sherif 154467



Youssef Yasser 160767

## ABSTRACT

The purpose of the research is to investigate the impact of Capital Adequacy (CAR) and Non-Performing Loans (NPLS) on Egyptian banks Liquidity, in addition to the abduction of some controlling variables as ROA, leverage ratio, and banks size. The study employs a sample size of 25 Egyptian banks, consisting of 13 listed and 12 non-listed banks, which is taken from 5 years (2014-2018). The research provides empirical evidence that there is a negative significant association between Capital Adequacy (CA) and Non-performing loans (NPLs) that explain how the higher level of banks CA requirements by Basel III might lead to control/eliminating the high level of banks NPLS , however the results indicate that there is an insignificant association between Non-performing loans (NPLs) and Capital Adequacy (CA) as the level of CA not affected by how the Egyptian banks are facing more or less NPL

يهدف هذا البحث الى اختبار تأثير كفايه رأس المال و القروض المتعثرة على السيوله الماليه بالبنوك المصريه، مع استخدام المتغيرات الضابطه كالعائد على الاصول، نسبه الرافعه الماليه، و حجم البنك. تتكون العينه من 25 بنك (13 بنك مدرج بالبورصه المصريه و 12 غيرمدرج بالبورصه المصريه) خلال 5 سنوات (2014-2018). لاختبار فروض الدراسه تم استخدام التحليل الوصفى، معامل الارتباط للتحليل الاحصائي. تشير النتائج الى وجود علاقه SPSSبيرسون، و تحليل الانحدار باستخدام برنامج عكسيه ذات دلاله احصائيه بين نسبه كفايه رأس المال و نسبه القروض المتعثرة و الذي يشير الى ان زياده كفايه راس المال بالبنوك، طبقا لاتفاقيه بازل الثالثه، يؤدى الى خفض نسبه القروض المتعثرة ، و لكن توضح النتائج أن نسبه القروض المتعثرة لدى البنوك لا تؤثر على نسبه كفايه رأس المال

Management sciences: Accounting

#### The Impact of Ownership Structure and Liquidity on the **Corporate Social Responsibility Disclosure in the Egyptian Stock Exchange Market** Supervisor:



Khaled Ahmed 172111



Ibrahim Ali 165283



Sarah wael 17653



Nada Ibrahim 170555



## ABSTRACT

The main purpose of the research is to examine the effect of ownership structure on the CSR disclosure, and examine the effect of liquidity on CSR disclosure. The sample will be 28 companies from the period 2015 to 2019, the companies are listed in the EGX 30 in the Egyptian stock market. The results showed the insignificant negative relationship between corporate social responsibility disclosure and ownership structure and also an insignificant negative relationship between corporate social responsibility disclosure and liquidity so if there's an increase in corporate social responsibility disclosure, the ownership structure will decrease.

الغرض من البحث هو فحص تأثير هيكل الملكية على الإفصاح عن المسؤولية الاجتماعية للشركات ، ودراسة تأثير السيولة على الإفصاح عن المسؤولية الاجتماعية للشركات. وستكون العينة من 28 شركة من الفترة 2015 إلى 2019 ، الشركات مدرجة في البورصة المصرية أظهرت النتائج العلاقة السلبية غير المهمة بين الإفصاح عن المسؤولية الاجتماعية للشركات وهيكل الملكية وأيضبًا علاقة سلبية غير مهمة بين الإفصاح عن المسؤولية الاجتماعية للشركات والسيولة ، لذلك إذا كانت هناك زيادة في الإفصاح عن المسؤولية الاجتماعية للشركات ، فسوف بنخفض هبكل الملكية

Management sciences: Accounting

#### Determinants of National Savings in Egypt and Tunisia: A Panel Data Analysis

Supervisor:

#### Prof. Dr. Heba Helmy



Nadeen Sherif 171279





Heidy Nasser 171617

## ABSTRACT

The general objective of this paper is to examine the main determinants that lead to the reduction of the national savings ratio in Egypt and Tunisia starting 2008. By conducting a panel data analysis comprising the time series data on the two countries starting 1991 till 2018, our research will investigate the effect of the independent variables- inflation rate, population growth, GDP/capita, unemployment rate, primary school enrollment, life expectancy, real interest rate and consumption level on the dependent variable which is the national savings rate in Egypt and Tunisia. The results concluded that real interest rate and life expectancy are insignificant variables, but that a positive and significant relationship exists between gross domestic savings and each of inflation, GDP/capita and tax revenue in the short run. On the other hand, a negative significant relationship between gross domestic savings and each of dependency rate, unemployment, primary school enrollment and the dummy variable representing the Arab Spring Revolution in the short run

الهدف العام من هذا البحث هو فحص المحددات الرئيسية التي تؤدي إلى انخفاض نسبة المدخرات Panel data)الوطنية في مصر وتونس ابتداء من عام 2008. من خلال إجراء بيانات لوحة تحليل يشمل بيانات السلاسل الزمنية على البلدين ابتداء من عام 1991 حتى عام 2018 ، (analysis بحثناسوف يبحث تأثير المتغيرات المستقلة - معدل التضخم ، النمو السكاني ،الناتج المحلي الإجمالي / الفرد ، معدل البطالة ، الالتحاق بالمدارس الابتدائية ، متوسط العمر المتوقع ، معدل الفائدة الحقيقي ومستوى الاستهلاك على المتغير التابع و هو معدل الادخار الوطني في مصر و تونس.

Management sciences: Economics

Does Financial Inclusion influence Economic Growth? Analyzing the Impact of Financial Inclusion on Economic Growth in Some Selected MENA countries (2006-2018)



Engy Aly Rashwan 170835



Salma Kamal Zanaty 173287

Supervisor:

Prof. Dr. Heba Helmy

## ABSTRACT



This research investigates the impact of financial inclusion on economic growth in MENA by using the data of some selected MENA countries over the period 2006-2018. the variables used to measure the financial inclusion are, number of automated teller machines, number of borrowers from commercial bank branches, number of commercial bank branches and the domestic credit to private sector and we explore their effect on GDP growth. Additionally, the methodology used to test for the relationships between the variables are panel least square, and ARDL models using the E-views 10 program. Findings revealed that in the short run, number of ATMs has a positive significant impact on economic growth, number of borrowers has a negative significant impact on economic growth, and number of domestic credit as a percentage of GDP has a negative insignificant impact on GDP growth. Accordingly, we recommend that policy makers in MENA countries should increase their efforts to increase people's access to financial institutions and enhance the concept of financial inclusion in their countries as it will boost the GDP growth in their countries and achieve higher living standards to their citizens.

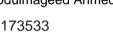
يدرس هذا البحث تأثير الشمول المالي على النمو الاقتصادي في منطقة الشرق الأوسط وشمال إفريقيا باستخدام بيانات بعض دول الشرق الأوسط وشمال إفريقيا المختارة خلال الفترة 2006- 2018. في الوقت الحاضر، تطور القطاع المالي عالميًا و أصبح جزء مهم في نمط الحياة اليومي لدى الناس. بشكل أساسي ،هناك عدد من المتغيرات استُخدمت لقياس الشمول المالي و هي كالآتي: عدد ماكينات الصراف الآلي ، عدد المقترضين من فروع البنوك التجارية ، عدد فروع البنوك التجارية والائتمان المحلي للقطاع الخاص ونحن نستكشف تأثيرهم على نمو الناتج المحلي الإجمالي.

Management sciences: Economics

#### The Effect of Different Advertising Appeals on Audience Intention to Donate: An Area of Application on Egyptian **Donation Campaigns** Supervisor: Dr. Samia El sheikh



Abdulmageed Ahmed





Rana Alaa 173787



Salma Sherif 173331



Ayman Wafaa 171541



## ABSTRACT

The aim of this research is to measure the effect of different advertising appeals on audiences' intention to donate, with an area of application on Egyptian donation campaigns. Researchers first used secondary research Followed by a primary research to get more reliable data, by using in-depth interviews with experts in the exploratory research and online questionnaires during data collection, while also conducting 230 questionnaires. Researchers found that there was a positive relationship between the four appeals and the intention to donate. Nonetheless, the rational appeal had a moderate relationship, the emotional appeal had a strong relationship, and the fear appeal as well as the humor appeal had a weak relationship.

يهدف هذه البحث إلى دراسة أثر تأثير الحملات الاعلانية بأنواعها المختلفة على رغبة الجمهور المصرى في التبرع بعد مراجعة الدر إسات السابقة،تم تصميم استبيان من القياسات المستخدمة في الدر اسات السابقة، وتم جمع 230 استبيانًا عبر الإنترنت من عينة من مشاهدي الحملات الاعلانية. أما بالنسبة لتحليل البيانات فقد تم استخدام حزمة برامج SPSS.أوضحت النتائج أن أنماط الأعلان المختلفة لها تأثير ايجابي على نية المشاهدين في التبرع وأعلى تأثير ناتج عن استخدام النمط العاطفي في الحملات اللأعلانية و اقل تأثير ناتج عن استخدام النمط الفكاهي في الأعلان

Management sciences: Marketing and International Business

## The effect of website aesthetics of Islamic art website on the user's attitude

Supervisor:

#### **Prof.Yasser Tawfik**



Reem Medhat 170343



Chady Byazid 163081



Merna Ahmed 173093



## ABSTRACT

The Islamic art website experiment is a conduction of three conditions for the website aesthetics which are high, normal, and low aesthetics to measure the user's attitude and their intentions to continue their activity on the website for people who are interested in Islamic art and especially faculty students of arts and deigns and architecture since it will help them in their education, and their knowledge to the easily acquire locations of the venues. This study aims to investigate the effect of website aesthetics of Islamic art website on the user's attitude. In addition to more understandings for the concepts of consumer's attitude together with the purchasing intentions of venue online tickets, trustworthiness, and website preferences containing memorization, website usability, and attractiveness.

تجربة موقع الفن الإسلامي هي عبارة عن توصيل لثلاثة شروط جماليات الموقع وهي جماليات عالية و عادية ومنخفضة لقياس موقف المستخدم ونواياه في مواصلة نشاطه على الموقع للأشخاص المهتمين بالفن الإسلامي وخاصة طلاب الفنون والتصميمات والهندسة المعمارية لأنها ستساعدهم في تعليمهم ، و معرفتهم بسهولة الحصول على مواقع الأماكن. تهدف هذه الدراسة إلى التحقق من تأثير جماليات الموقع الإلكتروني للفن الإسلامي على موقف المستخدم. بالإضافة إلى المزيد من الفهم لمفاهيم سلوك مستهلك جنبًا إلى جنب مع نوايا الشراء لتذاكر الأماكن عبر الإنترنت ، والجدارة بالثقة ، وتفضيلات موقع الويب التي تحتوي على الح<mark>فظ ، وسهولة استخدام موقع الويب ، والجاذبية</mark>

Management sciences: Marketing and International Business

The impact of unrealistic images and beauty standards in TRESemmé's advertisement on consumer's social appearance anxiety, physical health and psychological wellbeing.

> Supervisor: Dr. Heba Adel



Hend Sherif 172879





Nourhan Alaa 174403



Rehab Mohamed 173807



Zolfeya Zolfakar 174475



## ABSTRACT

This research aims to study the impact of unrealistic images and beauty standards in TRESemmé's advertisement on consumer's social appearance anxiety, physical health and psychological wellbeing. This research follows an exploratory design using a qualitative approach; 15 in-depth interviews were conducted with consumers; on the other hand, 1 in-depth interview was conducted with an industry expert followed by content analysis. As for the quantitative approach, a questionnaire was designed from measurements established in previous studies, and 240 questionnaires were collected online. Results showed that the use of unrealistic images and beauty standards positively affects consumer's social appearance anxiety, physical health and psychological wellbeing. Furthermore, consumer's social appearance anxiety positively affects both physical health and psychological wellbeing

TRESemmé يهدف هذه البحث إلى در اسة أثر الصور ومعايير الجمال غير الواقعية في اعلانات على القلق المتعلق بالمظهر الاجتماعي، الصحة الجسدية والنفسية للمستهلكين. بعد مر اجعة الدر اسات السابقة، تم اقتراح إطارًا فكرياً يحتوى أكثر المتغيرات صلةً بموضوع البحث وتم اتباع نهجاً يتضمن مزيجا من الأساليب (الكمية والنوعية). أوضحت النتائج أن استخدام الصور غير الواقعية ومعايير الجمال يؤثر بشكل إيجابي على القلق المتعلق بالمظهر الاجتماعي للمستهلك، والصحة الجسدية و النفسية.

Management sciences: Marketing and International Business

## **Design of Information System to Manage Laboratory Operations of Patients, Doctors and Lab physicians.**

Supervisor:

Dr. Adel Ghanam



Salma Kamal El-din 165235



## ABSTRACT

This project is undertaken to plan, design and develop information system to manage Laboratory Operations of patients, doctors and Lab physicians (Laboratory Information Management System "LIMS"). First, there is a Business case which includes product scope , Laboratory information management system definition, system objectives and goals, summary of system functions and target beneficial, project boundaries and project assumptions , source of need and expected demand size in Egypt. Features of the system contains theoretical background of the system and the functional requirements statements and a referential study for two already marketplace systems to compare between those systems and my system, Data flow diagram and its documentation to represent a flow of data through a process or a system, entity–relationship diagram (ERD) to represent real-world entities and the relationship between them, the OOAD steps and role of the UML modeling, Use-Case Diagram that is a representation of a user's interaction with the system , class diagram which describes the structure of a system, sequence diagram which shows object interactions arranged in time sequence, Activity diagram is a flowchart to represent the flow from one activity to another activity.

الذي (MIS) تم تنفيذ هذا المشروع كمشروع تخرج في السنة النهائية لبكالوريوس نظم المعلومات الإدارية ، مصر حيث يتم تنفيذ هذا المشروع لتخطيط وتصميم (MSA) تقدمه جامعة العلوم الحديثة والأداب وتطوير نظام المعلومات لإدارة العمليات المعملية من المرضى والأطباء وأطباء المختبرات (نظام إدارة أولاً ، حالة العمل والتي تتضمن نطاق المنتج ، وتعريف نظام إدارة .("LIMS" معلومات المختبر المعلومات المخبرية ، وأهداف النظام ، وملخص وظائف النظام و المستفيد المستهدف ، وحدود المشروع وافتراضاته ، ومصدر الحاجة وحجم الطلب المتوقع له في مصر

Management sciences: Management Information systems

#### Design of Information System to Manage House Cleaning Services

Supervisor:

#### Dr. Adel Ghanam



Dalia Mohamed

173871



## ABSTRACT

A house cleaning service application that enables customers to request and hire certified and professional cleaners to clean their house and business area, from the service options that would be displayed. It's a guaranteed application that provides customers with the safety needed to allow well-known cleaners to enter their household and trust them with the process. The offered benefits are that it provides a chance to the customer to set and formulate the schedules according to their desire, an option to subscribe to packages they might need, and the requirements needed for the cleaners, such as the cleaner's gender, age, and nationality preferred, which in return the application displays the history or record of the cleaner's personal information. It also displays the previous experience and application ratings and comments (from previous customer's experience with that cleaner) and allows current customers to place ratings and ask questions as well.

تطبيق خدمة تنظيف المنزل يمكن العملاء من طلب وتوظيف عمال النظافة المعتمدين والمهنيين لتنظيف المنزل ومناطق العمل من خيارات الخدمة التي سيتم عرضها. إنه تطبيق مضمون يوفر للعملاء الأمان اللازم للسماح لعمال النظافة المعروفين بدخول منازلهم والثقة بهم في هذه العملية. المزايا المعروضة هي أنه يوفر فرصة للعملاء لضبط وصياغة الجداول حسب ر غبتهم ، وخيار الاشتراك في الحزم التي قد يحتاجون إليها ، والمتطلبات اللازمة لعمال النظافة ، مثل جنس عامل التنظيف ، وعمره ، و الجنسية المفضلة ، والتي في المقابل يعرض التطبيق تاريخ أو سجل المعلومات الشخصية لعامل النظافة. كما يعرض التجربة السابقة وتقييمات التطبيق والتعليقات (من تجربة العملاء السابقة مع عامل النظافة مع ويسمح للعملاء الحاليين بوضع التقييمات وطرح الأسئلة أيضاً.

Management sciences: Management Information systems

# FACULTY OF PHARMACY

# Bioremediation of pharmaceuticals using alginate immobilized microorganisms



Ahmed Elgohary 160359



Mariam Hazem 160659



Marwa Ahmed



May Magdy 161347



## ABSTRACT

Recently, the environment has become highly stuffed with hazardous compounds from pharmaceutical, petrochemical and oil refining industries. These compounds might persist in the environment for long time and even being transported to humans through water and soil, affecting the human's health and well-being. Here comes the role of the pharmacist to help getting rid of these compounds by degrading them using biologically safe methods (such as bioremediation) using microorganisms, instead of traditional, environmentally non-friendly physical and chemical methods. Bioremediation is the use of living organisms for the recovery or cleaning up of a contaminated medium such as soil, sediment, air, or water. During the process of bioremediation, microorganisms are used to degrade organic contaminants in soil, groundwater, sludge, and solids. As per phenols are one of the highest organic pollutants in different industrial wastewaters, removal of phenol from industrial effluent is extremely important because of its toxicity to the aquatic life and environment. In this study, an effective enrichment technique was applied to isolate different bacterial strains with capabilities to utilize phenol as a sole energy source. Twelve different degrading bacterial strains were isolated from El-Lessan Area of Damietta River Nile Branch in Egypt with high phenol content of 135 mg/L. From all isolates; a Gram-negative bacterial isolate designated PM412 showed higher biodegradation efficiency, recording 76.15% removal of 100 mg/L phenol. PM412 was identified by 16S rDNA gene sequence analysis to be Pseudomonas putida PM412 with similarity of 98.89%. Several parameters were studied to optimize the degradation step. Furthermore, the process will be applied for the removal of pharmaceutical waste water containing different drug residues.

Supervisors: Prof. Dr. Manal Fouad. Dr. Hussein Nassar.

**Teaching Assistant:** 

TA. Lamis Mohamed

Pharmacy: Analytical Chemistry

Advanced electrochemical approaches for selective determination of selected drugs in different matrices



Mayar Mohamed 160805





Nada Mohamed 164673



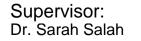
Monica Maged



Nancy El-Sayed 160419

#### ABSTRACT Electrochemistry is a science that deals with different methods and techniques used in analytical chemistry by introducing and measuring the relationship between different phases that contain electrons and other phases that contain ions. The movement of those electrons from one element to other leads to the generation of electricity by a reaction called redox reaction. There are three main electrochemical methods including voltammetry, conductometry and potentiometry. Voltammetry is considered to be a category of the electrochemical methods used in the analytical chemistry as it shows a lot of information about the analyte by measuring the relationship between voltage, current and time that arise in the cell. This cell consists of three electrodes which are counter electrode, working electrode and references electrode. There are many types of voltammetry that are classified according to the change in potential such as linear sweep voltammetry, staircase voltammetry, Normal pulse voltammetry, deferential pulse voltammetry, square wave voltammetry and stripping voltammetry. Moreover, screen printed electrode is a modified type of carbon paste electrode. It is an appropriate technique because no complex or expensive tools are required, and

printer operations are quick and fast. It was used for the determination of penciclovir and entecavir. The stock standard solutions of both drugs were prepared of concentration  $(1.0 \times 10 - 3 \text{ M})$ . acetate buffer, phosphate buffer and working electrode were also prepared. Positive increase in the electric current by increasing the voltage was found which indicated the oxidation process for both penciclovir and entecavir. After the determination of optimization factors, it was found that penciclovir followed diffusion phenomena. While entecavir was found to follow adsorption with diffusion phenomena. Furthermore, the most suitable pH for the determination of penciclovir and entecavir were found to be 5 and 8 respectively where the highest current occurred.



Teaching Assistant: TA. Amira Ismail

Pharmacy: Analytical Chemistry

Utilization and characterization of microcrystalline cellulose (MCC) obtained from different biomass as an economic excipient



Marwan Emad 161957



Khaled 163127



Nada Mohamed 162491



Rawan abd elrahman 162637

## ABSTRACT

Many biomasses are burnt daily to get rid of them as they are available in a large amount and the human does not want them. This action can cause an environmental problem like air pollution. Also these biomasses like water hyacinth, rice husk and wheat husk are available, cheap materials which contain a high percent of lignin and cellulose; they can be used in an ecofriendly method as they can be used in the extraction of the MCC which works as an adsorbent. MCC can be used as an adsorbent for the pollutants in the contaminated water. MCC is a depolymerized alpha cellulose pure precursor. The MCC also can be used in the pharmaceutical field as a bulking agent, fat substitute, emulsifier, thickener and binder in tablets. MCC can be obtained from the three different biomasses by steam explosion, acid hydrolysis, reactive extrusion and enzyme mediated. In our study we used the acidic hydrolysis in the extraction of the microcrystalline cellulose from the three biomasses. We were looking forward for the extract of the microcrystalline cellulose by using the minimal cost, most effective and ecofriendly method. After that comparing the extracted microcrystalline cellulose with the microcrystalline cellulose found in the market according to the cost, NMR, SEM, FT -IR and XRD.

Supervisor:

**Teaching Assistant:** 

Prof. Dr. Safa'a Riad

TA. Dina Atef

Pharmacy: Analytical Chemistry

#### Smart Membranes for Water Remediation Using Different Biomasses



Abdulaziz Sherif 162809





Mohannid Saber 161215



Omar Khaled



Omar Mohamed 162635

## ABSTRACT

Electrochemistry is a science that deals with different methods and techniques used in analytical chemistry by introducing and measuring the relationship between different phases that contain electrons and other phases that contain ions. The movement of those electrons from one element to other leads to the generation of electricity by a reaction called redox reaction. There are three main electrochemical methods including voltammetry, conductometry and potentiometry. Voltammetry is considered to be a category of the electrochemical methods used in the analytical chemistry as it shows a lot of information about the analyte by measuring the relationship between voltage, current and time that arise in the cell. This cell consists of three electrodes which are counter electrode, working electrode and references electrode. There are many types of voltammetry that are classified according to the change in potential such as linear sweep voltammetry, staircase voltammetry, Normal pulse voltammetry, deferential pulse voltammetry, square wave voltammetry and stripping voltammetry. Moreover, screen printed electrode is a modified type of carbon paste electrode. It is an appropriate technique because no complex or expensive tools are required, and printer operations are quick and fast. It was used for the determination of penciclovir and entecavir. The stock standard solutions of both drugs were prepared of concentration  $(1.0 \times 10 - 3 \text{ M})$ . acetate buffer, phosphate buffer and working electrode were also prepared. Positive increase in the electric current by increasing the voltage was found which indicated the oxidation process for both penciclovir and entecavir. After the determination of optimization factors, it was found that penciclovir followed diffusion phenomena. While entecavir was found to follow adsorption with diffusion phenomena. Furthermore, the most suitable pH for the determination of penciclovir and entecavir were found to be 5 and 8 respectively where the highest current occurred.

Supervisor: Prof. Dr. Safa'a Riad Teaching Assistant: AL. Heba Tarek

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#### The Biochemical Effect of Herbal Tea Mixture in High Fat Diet Induced Obesity in Rats



Esraa Ibrahem 161639



Martina Fawzy 163409



Perihan Ashraf 163967



Shaden Ahmed 164683



Herbal medicine is a common alternative therapy employed in obesity. This study aims to investigate the biochemical effect of herbal tea mixture and its nanoformulation in the treatment of obesity in HFDinduced obese rats. The materials used were the tea mixture, consisting of white, green and Oolong teas, and its nano-formulation. Forty albino male rats are classified into eight groups, each group comprising of five rats were used. In order to induce obesity and initiate the treatment, the following design was followed: Group I: Control fed with normal feed pellets, Group II: High fat diet (HFD) and feed pellets fed for 13 weeks and 28 days, Group III: Stop Diet fed with HFD for 13 weeks, then of feed pellets only for 28 days, Group IV: HFD-fed for 13 weeks, afterwards, for twenty eight days tea mixture of 100 mg/kg was administered orally, Group V: HFD-fed for 13 weeks, afterwards, for twenty eight days tea Nano mixture of 100 mg/kg was administered orally, Group VI: HFD-fed for 13 weeks, afterwards, for twenty eight days tea mixture of 300 mg/kg was administered orally, Group VII: HFD-fed for 13 weeks, afterwards, for twenty eight days tea Nano mixture of 300 mg/kg was administered orally, Group VIII: HFD-fed for 13 weeks, afterwards, for twenty eight days orlistat of 200 mg/kg was administered orally. The results showed that the levels of TG, VLDL, and glucose in serum were significantly reduced in the treatment groups, while the serum levels of HDL, LDL TC, insulin, creatinine, ALT and AST showed no significant difference. The tea mixture treatment was proven to be more superior to the Orlistat in lowering serum TG and VLDL levels. In the ELISA analysis, serum leptin levels were decreased and serum adiponectin levels were increased in the treatment groups. In qRT-PCR analysis, the expression of Sirt1 and PPARy genes was increased in the treatment groups, with a higher increase given by the nanoformulated mixture. Also, the expression of TNFa and ADD1/SREBP-1c was reduced in treatment groups, with a higher decrease given by nanoformulated mixture. These findings suggests that the tea mixture and its nanoformulation can treat obesity by inhibiting the pancreatic lipase, reduction in leptin and increase in adiponectin, regulation of genes, Sirt1 and PPARy, that induce lipolysis, and decrease in SREBP-1c and TNFa, decreasing inflammation and adipogenesis.

Supervisor: Dr. Nora Aborehab

Teaching Assistant: TA. Radwa Saeed

#### Genetic Basis Associated with Osteoporosis: An invivo Study



Bouthaina Hossam 164267





Nourhan Sherif 164397



Mariam Naser



Zina Taher

## ABSTRACT

Osteoporosis is a very common bone disease that is characterized by low bone mineral density, as a result of impaired bone mineralization. Consequently, patients suffering from osteoporosis are highly prone to fractures, which sometimes can be life-threatening. Usually, patients suffering from osteoporosis have no symptoms until the first fracture occurs. Osteoporosis is mainly diagnosed by low Bone Mineral Density (BMD), which is assessed using DEXA scan. Besides bisphosphonates, which are used as the first line of treatment for osteoporosis, Selective Estrogen Receptor Modulators (SERMs) are also commonly used. Lately, studying the pathogenesis of osteoporosis on the molecular level has gained more attention. Several miRNAs, genes and epigenetic modifications have been linked to osteoporosis. This allows for better understanding of the disease incidence, progression, and treatment. The main aim of this work is to study the molecular mechanisms underlying the progression and treatment of osteoporosis. Using bone samples from established osteoporotic rat models, we investigated the role of WNT-signalling pathway in osteoporosis development and treatment, as well as the role of histone acetylation and miR-148a-3p in progression and treatment of the disease. Our study suggests that WNT-signalling pathway is inhibited during the progression of osteoporosis; and that upon treatment, WNT-signalling recovers to close-to-normal levels. Our work also indicates that the extent of histone acetylation of WNT-1 gene, and the level of miR-148a-3p, could play a role in the regulation of WNT-signalling pathway during the progression and treatment of osteoporosis. Taken together, our results show that targeting WNT-signalling pathway for the development of future treatments for osteoporosis seems to be a realistic option.

Supervisor: Assoc. Prof. Dr. Iman Gomaa Teaching Assistant: TA. Radwa Saeed

#### Evaluating the Role of cAMP in Sleep Deprivation



Clara Rafaat 163315



John Gerges



Kirollos Emad



Maria Wagdy 161887



Sleep deprivation is a condition of disrupted sleep cycle, it happens when an individual does not get enough sleep necessary for the individual to wake up alert enough during the day. It can be acute or chronic. Some of the causes of sleep deprivation are imposed on the individual as the nature of his/her occupation and working schedule, health conditions, use of some drugs and insomnia. Other causes are related to habits or individual responses as excessive alcohol consumption, personal obligations and emotional stress. cAMP is an important secondary messenger and it regulates a lot of functions in the human body. Rolipram is a phosphodiesterase-4 inhibitor and should prevent the hydrolysis of cAMP. On the other hand the action of chlorogenic acid is to activate calcineurin which inactivates the DARPP-32 thus allowing the dephosphorylation of protein kinase A and reversing the action of cAMP. The aim of this study is to investigate a different mechanism by which cAMP affects sleep deprivation and the effects of its elevation on memory and the learning abilities of sleep deprived mice using rolipram and chlorogenic acid. Induction of sleep deprivation test used in this study by flower pot method dividing the mice into four groups each group consists of six mice. Mice injected with the corresponding treatment and their learning memory tested with Morris water maze. Hippocampus screening is used for the assay of cAMP and Nrf-2 using ELISA. GSK3β, CREB and PKA levels are measured by Western Blot technique. The results showed that the rolipram inhibits the degradation of cAMP that activates the PKA pathway; the level of GSK3-beta, NFR2 and the CREB increased. In conclusion, activation of cAMP leads to improvement of memory, increase of cognition abilities and decrease in inflammation and oxidative stress. On the other hand cholorgenic acid has an opposing mechanism against rolipram which leads to decrease in the levels of GSK3-b, NFR2 and CREB.

Supervisor: Dr. Ahmed Maher Teaching Assistant: TA. Radwa Saeed

# Stem cells; a promising candidate for treatment of rheumatoid arthritis



Esraa Khaled 162531





Aliaa Amir



Maryam Sayed 160569



Amira Shraf 160709

## ABSTRACT

Rheumatoid arthritis is an auto-immune disease characterized by loss of self-tolerance in the joints; consequently resulting in inflammation in joints, cartilage destruction and bone erosion (Mitra, 2013). Recent studies deducted that stem cells are a promising candidate that could achieve balanced equilibrium between addressing the pathophysiology of RA and overcoming conventional drugs' disadvantages. MSCs are multi-potent stem cells primarily transformed in the bone marrow: in addition, it has a crucial role in repairing and forming skeletal tissues, such as; adipocytes, chondrocytes and osteocytes (Greish et al., 2012). Besides MSCs chondrogenic differentiation potential, it also orchestrates the activity of the immune system through direct and indirect interactions and it also has a significant anti-inflammatory effects. On the other hand, the objective involves brief discussion on the pathophysiology of rheumatoid arthritis, stem cells and their isolation scheme as well as method of disease induction. Moreover, it also involves the investigation of disease parameters and exploring the modulatory effect of mesenchymal stem cells on RA. At the end of treatment period, the levels of interleukin 1, 10,  $TNF\alpha$  and interferon were measured using ELISA in serum. Moreover, real time PCR was used to detect the following genes: alkaline phosphatase (mALP), transcription factor sp7 (mOsterix) and collagen type I or alpha 1 (mCOL-I). Finally, comet assay was also employed to assess the degree of damage or repair to the DNA. The results showed significant increase in osteogenic markers and IL-10; and significant reduction in proinflammatory cytokines, %T, TM and OTM values in the MSC group when compared to the other groups.

#### Supervisor:

#### **Teaching Assistant:**

Dr. Sherine Mahmoud

TA. Mirna Khaled

# Investigate the prognostic values of Tolemerase expression in breast cancer



Abdelrahman Mohamed 164059



Abdullah Tarek 162103



Israa Tarek

160749



Mennaallah Mohamed 161923



## ABSTRACT

Background: Several studies have shown up-regulated telomerase activities to be linked to poor prognosis, survival of cancer cells, cancer progression and may also increase drug resistance of breast cancer, however, our understanding of telomerase activity in breast cancer remain limited. Aim of work: to investigate the role of telomerase expression in breast cancer prognosis. Furthermore, the association between telomerase expression and with other parameters including tumor features including: clinicopathology parameters disease outcome, disease recurrence and hormone receptor status was assessed. Objective: the current study is to examine the association between telomerase expression and survival to evaluate the current state of knowledge concerning the value of telomerase expression as a prognostic factor. METHODS: A 63 women (patients) above 18 years old eligible pathologically proven with metastatic breast cancer presenting to Oncology Clinic of Baheya Cancer Center during duration of study were enrolled in this study. All patients were scheduled to receive adjuvant treatment after surgical interference. The data will be extracted from Electronic Medical Records into a designed standard clinical data sheet. Including clinical and pathological characteristic of study population, Telomerase expression test is done by collecting Blood sample at end of experiment according to hospital protocol (for serum sample). RNA extraction by commercially available kits (RT-PCR) hTERT detection (to detect positive &negative results). Only sample clearly positive twice were scored as positive. The test done in Baheya hospital lab. Statistical analysis of result by fisher's exact test and Wilcoxon rank-sum test. Result: Clinical and pathological characteristics of the study population revealed that about 76% of patients with age raged from (41-70) years old and about 67% of patient had BMI of ( 31- above 40 kg\m2 ).while (34.92%) of patients were PR+ER (+ve) and 12.69% were HER2 (+ve). Moreover 41.5% of patients received both chemotherapy and hormonal therapy. In addition, Result showed that 62% (n=39) has high +ve expression VS 38% (n=24) with low +ve . Also, results reported that there is a significant association between patient with high +ve results and treatment regimen as these patients were received either chemotherapy protocol or chemotherapy + Herceptin. Moreover, there was insignificant association between telomerase expression and other clinical and pathological measurements.

Supervisor: Prof. Dr. Soheir Aboazm

TA. Mennatullah Hassan

Pharmacy: Clinical Pharmacy

Role of Zoledronic acid and Denosumab in osteoporosis and tumor spreading in Post-menopausal breast cancer women in Baheya



Aliaa Ali

163089





Menna Tallah Abdelhaliem 160263



Nancy Yehia 162089



Yasmin Ashraf 161969

## ABSTRACT

Back ground: Cancer is one of the leading causes of death worldwide. Breast cancer is common among Egyptian females and there is a great correlation between breast cancer therapy especially chemo or hormonal therapy and osteoporosis. Osteoporosis is characterized by low bone mass and deterioration of bone tissue. Zoledronic acid and Denosumab is expected to effectively treat osteoporosis and decrease tumor metastasis.Aim: is to assess the role of Zoledronic acid and Denosumab in treatment of osteoporosis and decreasing tumor spreading in postmenopausal breast cancer women. Methodology: 85 reports were collected from Baheya Foundation from post-menopausal women received chemotherapy or hormonal therapy, had osteoporosis and administered Zoledronic acid or Denosumab. Data were collected from double DEXA scan reports in order to compare between the 2 DEXA to assess the improvement in bone density and the efficacy of the drug. Another 85 reports were gathered from post-menopausal women who didn't administer Zoledronic acid or Denosumab nor had osteoporosis as a comparison group to prove the antitumor effect of the drugs. Results: In this study, it was found that bone density of 63% from the total women was enhanced after administering Zoledronic acid or Denosumab. Denosumab was effective in the treatment of osteoporosis with a percentage 80% while Zoledronic acid 59%. Moreover, only 4% of the total patients who were administering zoledronic acid or denosumab in the study group suffered from metastasis and 60% of the total cases in the control group got a metastatic cancer. Conclusion: The research proved that Zoledronic acid and Denosumab have a significant effect on enhancing bone density. The effectiveness of Denosumab is higher than Zoledronic acid. The efficacy of both drugs is inversely proportional with the patients' age. Finally, both drugs show an inhibitory effect on the tumor metastasis and improvement in the survival of breast cancer women.

#### Supervisor: Prof. Dr. Abdel-Hamid Elhawary

Teaching Assistant:

TA. Gelan Hamdy

Pharmacy: Clinical Pharmacy

Evaluation of the treatment effectiveness of HIVinfected Kaposi sarcoma patients in Egypt



Aya Ayman

162501



Dina Alaa

165355



Mayar Tarek

160655



Nada Saad

162155



## ABSTRACT

Kaposi sarcoma (KS) is the most common tumor associated with HV. KS develops as lesions that appear on the skin, lymph nodes, lung, digestive tract and mucosal lining. The color of such lesions can be brown, pink, red or violet and it is difficult to be distinguished in individuals with dark skin. Our study focuses on HIV associated KS (HIV-KS) in Egypt and it was found that HIV-KS patients are treated with a combination of highly active antiretroviral therapy (HAART) and chemotherapy. The main 3 chemotherapy regimens used are liposomal doxorubicin, paclitaxel, and ABV (Adriamycin, bleomycin and vincristine/vinblastine). Studies revealed the variation of efficacy between the 3 regimens with or without the HAART therapy, however such studies are lacking on Egyptian patients. . The aim of the current study is to assess and compare the efficacy of the treatments systemically and clinically in HIV-KS Egyptian patients. Since inflammatory cytokines (IL-6, IL-1β and TNF- $\alpha$ ) have been confirmed about their significant role in initiation and progression of HIV-KS therefore we rely on them in our study to assess the efficacy of different regimen during a period of three months by collecting blood samples at the beginning of the study and after 3 months period for measurement of IL-6, IL-1 $\beta$  and TNF- $\alpha$  levels by using sandwich ELISA technique. Moreover, lesions will be assessed regarding their size, shape, color and height.

Supervisor: Dr. Mona Magdy

Teaching Assistant: TA. Rana Khalid

Pharmacy: Clinical Pharmacy

#### Bioremediation of pharmaceuticals using alginate immobilized microorganisms



Nourhan Emad Ali 160377





Noha Ibrahim Saber 160919



MenatAllah Sherif Elsayed 161853



Noha Ahmed Hassan 162631

## ABSTRACT

Pharmaceuticals wastes and their ways of disposal are an alarming problem nowadays and it is earning more awareness and realization from consumers and also professionals of healthcare. The acceleration in pollution in the environment coupled with the increase of wastes entering the eco-system has attracted the interest of researchers to focus on finding a way to remove these wastes in the most proper manner. Phenolic waste compounds mainly found in water and soil due to pollution from several industries such as petroleum, pesticides, plastic and pharmaceutical industries. phenolic compounds are harmful to human health and causes many health problems with the evolution of this problem Bioremediation arise because in nature everything is a food for something else, in bioremediation process the living organism is used in contaminated soil, water and air to thrive on the wastes in the contaminated area and convert the wastes from toxic form to another or completely degrading it. Bioremediation has many techniques as in situ or ex- situ techniques on the basis of the pollutants and the type of used technique. Immobilization is preventing the free movement of enzymes or cells by using a supporter. Using immobilized enzymes or cells is preferred than using the soluble enzyme because immobilization techniques have many advantages. The most common method used is entrapment because of its easy, inexpensive and the polymer formed can be easily divided into particles with the desired size. Alginate is the supporter matrix as it natural, inert and stable.

Supervisor: Assoc. Prof. Dr. Mahmoud Tawfick TA. Toga Elmansy

Teaching Assistant:

Isolation and Characterization of Bacteriophages as Potential Alternative Therapy for Infections Caused by Multidrug- Resistant Gram-negative Pathogens



Esraa Tarek Mohamed 150223



Hend EssamEldin 153503



Abdelrahman Mahmoud 162593



Osama Alaa Hassan 152533



## **ABSTRACT**

No shadow of a doubt that the emerging of resistance of Gram-negative nosocomial infections rings the bell of danger, especially after they proved their resistance against carbapenems which was the last resort of antibiotics. In recent years, researchers have changed their destinations to start studving bacteriophages after a decade of no new classes of antibiotics which were known as "dry pipeline". This study aims to investigate the potential of using lytic bacteriophages as an alternative therapy to antibiotics for MDR infections caused by biofilm- producing Gramnegative bacteria "Klebsiella pneumoniae", "Acinetobacter baumannii" and "Pseudomonas aeruginosa", 30 clinical bacterial isolates for each bacterial species were collected from hospitals in Cairo, Egypt and identified phenotypically, then tested for their resistance against antibiotics using Kirby Bauer disk diffusion method. Liquid sewage samples were collected from sewage stations and hospitals around Egypt then were processed without filtration or centrifugation and incubated with the bacteria to propagate the phages present, furthermore, phages were hunted using spotting assay, isolated and purified by serial dilution 7 times. Teaching

Supervisor:

Assoc. Prof. Mahmoud Tawfick Assistant: A.L. Bishov Maher

Screening of the antimicrobial effect of Lactobacillus isolates from dairy products on Staphylococcus aureus isolates.



Adham Ashraf 136889





Ahmed Taha 102155



Mohamed Said 130379

### ABSTRACT

Probiotics are live beneficial microorganism which can maintain human health when applied . Because of its inhibitory and potential antimicrobial effect against various kinds of bacteria and some human pathogenic strains. Lactobacillus is found to be the best type of probiotics to be studied . It can be found in milk and cheese ( C. Dunne, L. O'Mahony, 2001). Lactobacillus is the most commonly used probiotic in foods including yogurt and its use is extensive in preserving human health because it may help to treat menstrual diseases and skin eczema. It also produces antimicrobial peptides (bacteriocins) active against several pathogens (U. Schillinger, 1999). Lactobacillus is found to has an antimicrobial effect against Staphylococcus aureus. Staphylococcus aureus is gram-positive bacteria which are cocci-like and are typically arranged in grape-like clusters. Its a considerable bacterial disease causing a wide range of clinical manifestations. These organisms may develop at 18 C to 40 C temperatures and can grow aerobically or anaerobically. Therapy is still challenging because of multi-drug resistant strains such as MRSA (Staphylococcus aureus methicillin-resistant) is a multi-drug resistant line. S. Aureus is also found in normal human flora, located on the skin and mucous membranes. Consequently, our aim of this research is to investigate antimicrobial effect of Lactobacillus isolates from dairy products Staphylococcus aureus isolates. Achieving research aim can be carried out through the following steps: Isolation of Lactobacillus from different milk products, Identification of the isolates by Gram staining and biochemical reactions, Investigating the antimicrobial effect of Lactobacillus isolates on the isolates

Supervisor: Dr. Lamiaa Ismail Teaching Assistant: A.L Karim Talaat

Monitoring the Role of Programmed Cell Death 1 and its Ligands in Autoimmune Systemic Lupus Erythematous Disease



Ahmed Mostafa 130333



Eman Ezzat 150213



Mayar Mohsen



Walaa Abdalaa 134549

## **ABST**RACT

Autoimmune diseases are one of the recent dangerous issues that occur without specific known reasons. This condition the immune system start to attack the host cells rather than protect the body from any harmful invasion considering these cells as a foreign substance needed to be attack. The reasons behind the falling of immune system to recognize the difference between the host cells and the foreign cells are unknown and they may be genetic, environmental, bad life style, uncontrolled diet or physiological reason. Systemic lupus erythematosus (SLE) is one of the autoimmune diseases that mostly affect women in which the immune system start to attack the cells of the body result in many serious damage to different organs especially to skin, kidneys, liver and heart. For the diagnosis of SLE there are different assessment methods; either non-specific such as the serological test and the measuring of anti-dsDNA concentration in blood which increase with the presence of the disease or specific measuring through measuring the concentration of percentages of PD-1(program cell death that express on both CD3 T cells and CD19 B cells) and percentages of PD-L1(program cell death ligand that express on CD19 B cells). Both levels can be measured using flow cytometer. Flow cytometer is an approach used to measure and detect various properties of the cells released to promote down regulation of immune system leading to of the autoimmune problem as a defense mechanism from the body against the up normal attacking of the immune system.

Supervisors: Prof. Dr. Faten Bayoumi / Dr. Eman Eissa

Teaching Assistant: TA. Zainab Kamel

#### DESIGN, SYNTHESIS AND BIOLOGICAL EVALUATION OF NARINGENIN DERIVATIVES



Alaa Medhat

162897





Leyla Muhumed 161651



Marwan Alaa 165083



Nouran Ahmed 162073

## ABSTRACT

Naringenin is a flavonoid that belongs to the flavanones subclass found in several citrus fruits. It is a primary C15 intermediate in the biosynthesis pathway of flavonoids. It has a broad spectrum of biological activity such as anti-inflammatory, anti-viral, anti-Alzheimer, anti-diabetic, hepatoprotective, and cardio-protective, eve protective, anti-oxidant and anti-cancer activities. Therefore, it is important to identify the mechanism of action of anti-oxidant and anti-cancer activities in naringenin because it makes it beneficial in the pharmaceutical industry. The anti-oxidant activity of naringenin is owed to the hydroxyl groups present in positions 5 and 7 in the A ring and 4' in the B ring. The activity increased with a double bond between C2-C3 in ring C and electron-donating groups at position 3 in ring C. 5, 7 dihydroxy groups can stabilize the structure through resonance. The 4-carbonyl substituent and the 5-hydroxy group in naringenin are able to from complexes with transition metalspreventing the formation of free radicals. Naringenin can be synthesized from naringin by enzymatic hydrolysis using naringinase enzyme. Several derivatives can be synthesized from naringenin such as naringenin O-alkyl derivatives, naringenin oximes and oxime ethers, and the incorporation of biotransformation technology can also produce a number of derivatives. The derivatives are beneficial because they often have more potent biological activity. Our aim is to design new amine derivatives of naringenin, and test the biological activity of the newly synthesized compounds against cancer cell lines. These derivatives were synthesized by aldol condensation reaction followed by the nucleophilic addition of different amines. Different spectroscopic methods of analysis, such as 1H **Teaching Assistant:** Supervisor:

Dr. Amal Hassan

Pharmacy: Organic chemistry

A.L. Bassant Rateb

Synthesis of new quinoxaline derivatives as antibacterial agents.



Mohamed Ahmed 162055



Yara abdelsamie



Islam Mahmoud 160757



Magd Eleslam 162745



## ABSTRACT

MRSA are dangerous nosocomial pathogens, finding of treatment effective may be challenging. These organisms (MRSA) become increasingly resistant to drugs other than betalactams, while become easier to treat. Quinoxaline and its derivatives are synthetic origin compounds. Quinoxaline nucleus and its derivatives takes a large part of interesting pharmacological actions and effects of the active compounds against several disorders, there are a lot of important pharmacological activities for example, antibacterial, anti-inflammatory, antiviral, anti-candida, anti-microbial, anti-tumor, Anti-oxidant agent, cytotoxic and anti-cancer effects. Our aim is to design and synthesize different quinoxaline derivatives in order to develop potential anti-bacterial agents.

Supervisor: Prof.Dr. Aliaa M.Kamal Teaching Assistant: A.L. Aliya ElNewahie

Pharmacy: Organic chemistry

#### The design of secretase inhibitors as potential anti Alzheimer agents.



Mahmoud Abdelgawad 161405





Menna-Allah Adel 161523



Menna Ashraf 161493



Merna Magdy 160849

# ABSTRACT Alzheimer disease is a severe neurodegenerative disease concerns

with a massive impact on health of individuals. Researchers assumed that there are two main neuropathological hypotheses which are; cholinergic hypothesis and beta amyloid plaques hypothesis. The amyloid cascade hypothesis involves the cleavage of amyloid precursor protein (APP) by secretase enzymes and accumulation of β amyloid insoluble peptides in brain because of the incorrect actions of those different secretase enzymes known as  $\alpha$ ,  $\gamma$  and  $\beta$  secretase. These insoluble plaques trigger a series of events leading to dementia and neuronal dysfunction. Several research and development centers support the idea of discovering a new disease modifying therapy as anti-amyloid agent which inhibits the action of secretase enzymes involved in the pathophysiology. Therefore, we aim to develop a potential new anti-amyloid agent targeting beta secretase enzyme with the least possible side effects to treat AD efficiently and prevent the aggregation of β amyloid plagues. A structure-based pharmacophore approach was used to identify the essential features responsible for the inhibitory activity. A pharmacophore model was generated through using 3 PDB codes, validation and screening against FDA approved drugs database was carried out using LigandScout. It was found that the key features were: two hydrophobic, one positive ionizable, and one hydrogen bond donor interaction. After virtualscreening, 61 hits were found to be fulfilled our generated pharmacophore. 10 hits were selected from them after filtering with their molecular weight and pharmacophore fit score. Then molecular docking for the previously identified 10 hits is performed using MOE software. Best poses for the 10 hits were found to have similar interactions with the amino acids same as in our generated pharmacophore.

#### Supervisor: Dr. Rana Refaey

**Teaching Assistant:** A.L. Ramy Ramsis

Pharmacy: Pharmaceutical chemistry

#### The Use of Nanotechnology for Drug Brain Targeting



Alyaa Abdelhameed 161455



Arwa Mohamed 161195



Aya Hesham 162081



Nohir Mohamed



#### ABSTRACT

To achieve successful delivery to the brain, drugs should possess high lipid solubility and adequately-sufficient membrane permeability. Epilepsy is considered one of the most serious diseases worldwide that affects the brain. Zonisamide is an anti-epileptic drug (AED) that is known for its highly hydrophilic properties that hinder its passage across the blood brain barrier (BBB) efficiently. Therefore, the aim of this study is to improve the efficiency of the centrally acting Zonisamide, and the objective is to use the nanoparticles (NPs) technology for increasing the efficiency of the centrally acting Zonisamide. Nanodiamonds (NDs) carriers are known for their solubility enhancement for passing BBB. Drug loaded NDs were prepared and characterized for different in vitro aspects (particle size and zeta potential). 20 m Zonisamide were diluted in 10 ml distilled water, NDs were added in a concentration of either 4 mg/10 ml or 6 mg/ml and sonicated in the presence of several excipients, which were added for the purpose of de-aggregation namely Albumin, Gelatin and Chitosan. Preparations were characterized for their particle size, zeta potential, in vitro drug release, as well as an in vivo biodistribution study using Tc-99 as a radio-marker. Zonisamide has been loaded on NDs successfully, the particle size of the formulation was within the nano range to be introduced through the nasal cavity, and the in vitro drug release of Zonisamide from the dialysis bag was sustained. The biodistribution study showed marked increased distribution of the formulation in the brain compared to the rest of the tissues. Thus, it can be concluded that Zonisamide loaded NDs is a successful formulation in delivery and targeting of Zonisamide to the brain.

Supervisor Prof.Dr. Hanan Al Laithy / Dr. Nihal Mohamed Teaching Assistant: A.L. Omar Elkady

Pharmacy: Pharmaceutics

# Topical platelets rich plasma hydrogel for skin rejuvenation and antiaging purposes



Ahmed Hany 161879





Mahmoud Adel 161995



Passant Assem 163919



Omnia Ayman 164273

ABSTRACT

#### The human skin works as a shield against all the extrinsic factors that may harm human. It consists of many layers, and has many functions in the human. It maintains the normal internal composition of the deep layers and the external physical appearance; however, skin is affected by multiple intrinsic and extrinsic factors that may alter its composition and external appearance. Skin aging is a complex process that occurs due to multiple factors, including the aging itself, smoking, repeated facial expressions, and exposure to UV light (photoaging). The increase of an aging population and sun exposure as well as the growing interest in external appearance lead to seeking treatment for prevention or reversal of this process. Platelets rich plasma has been one safe treatment to be used to prevent skin aging or slow down the aging process. However, the current procedure is a bit painful due to injection of platelet rich plasma directly into the skin, by syringes or dermaroller. So, the current study is conducted to make a safe, pain free, hydrogel effective PRP topical formulation. Also, the penetration of PRP may be enhanced by applying physical enhancers like sonoporation and chemical enhancers like trypsin to increase penetration and give an effective treatment in a pain free PRP hydrogel formulation to be used topically on the skin. The PRP was isolated after the blood was withdrawn and centrifuged, make the gel by using Carbopol 934, prepare buffer solution and trypsin solutions with the preparation of PRP gel.

Supervisor: Prof.Dr. Ghada Ehab Yassin

Teaching Assistant: T.A Heidi Maklad

Pharmacy: pharmaceutics

#### The Use of Nanotechnology for Drug Brain Targeting



Ahmed Mohamed

160237



Heba Mamdouh <sup>162493</sup>



May Mustafa 162041



Sherouk Tarek 163085



### ABSTRACT

Epilepsy is considered as a disturbance in the balance of the electrical system of the brain, which leads to seizures that can affect both adults and children (Manford, 2017). Unfortunately it is difficult to be treated due to the fact that the most of centrally active drugs in brain suffer of decreased in efficiency to pass the blood brain barrier due to their hydrophilicity, such as antiepileptic drugs as Zonisamide which works by blocking the calcium, potassium and sodium channels, in addition to reducing the glutamate excitation and increasing GABA to reduce the epileptic seizures. The nanodiamond was selected as a carrier, due to its small particle size and biocompatibilities. Which make it more favorable than other nanocarriers for this purpose. Thus, our study aims to prepare a suitable formula Zonisamide loaded Nanodiamonds for brain targeting through nose to brain delivery. Zonisamide loaded nanodiamond delivery system was prepared and then being characterized for various in vitro aspects [particle size, % of drug loading, zeta potential, drug loading, FTIR and surface morphological structures through the Transmission Electron Microscopy, Particle size for the formula of choice was 193.73 nm ,zeta potential was found to be 18.93 mV, with high drug loading of Zonisamide on Nanodiamonds of 83.821, TEM confirmed the particle size and it's morphological structure and finally FTIR which confirmed the loading of Zonisamide. Thus it can be concluded that the Zonisamide was successfully loaded on nanodiamonds with suitable particle size for brain delivery.

Supervisor: Prof.Dr. Hanan Al-Laithy / Dr. Nihal Mohamed Teaching Assistant: A.L. Omar Elkady

Pharmacy: pharmaceutics

Artificial Neutral Network and Response Surface Methodology as Tools of Quality by Design Approach for the Enhancement of the Solubility of a Poorly Soluble Drug using Albumin Nanoparticles



Huda Taha

162611





Merna Khaled



Mahmoud Hossam



Mahmoud Kamaly 160781

The aim of the current work is the enhancement of the solubility of a poorly soluble drug using albumin nanoparticles by applying quality by design approach. using several tools as artificial neural network and response surface methodology for the optimization of albumin nanoparticles. Silymarin is an extract of dried milk thistle seed with many uses such as anticancer drug, anti-inflammatory, antioxidant and hepatoprotective agent. One of the main problems in the Silymarin that it has poor water solubility and poor bioavailability. This problem could be solved by its formulation in albumin nanoparticles. A complete quality target product profile has been constructed, and Ishikawa diagrams were very beneficial in the risk assessment study. Fractional factorial design was used in the screening, where time of stirring, albumin concentration, pH, drug amount, amount of ethanol and the type of solvent were the critical process parameters/ material attributes (CPP/MA), and were tested on the particle size, polydispersity index and the encapsulation efficiency, which were considered as the critical quality attributes(CQA). Whereas, D-optimal design the response surface design (RSD) and was used for the optimization step, where the drug amount and the albumin concentration were only tested on the same previously measured CQA.

#### Supervisor:

Dr. Marwa Hamdy

Teaching Assistant: A.L. Lamis Helmy

ABSTRACT

Pharmacy: Pharmaceutics

Colon- specific Multi-particular System of protein Delivery: A Potential Approach for Treatment of Colon Cancer



Ahmed Gamal 160183



Mahmoud Alaa 162803



Nouran Tarek



Zahraa Hussien 160509

## ABSTRACT

Colon cancer is one of most common types of cancer and the second cause of death worldwide. Colon- specific drug delivery systems (CDDS) are carried out to reduce systemic side effects and improving protein-drugs' oral bioavailability. Bee Venom is a protein that inhibits growth of cancer cells. Three different oral Bee Venom (BV)- chitosan microspheres formulations were prepared and evaluated using different BV:chitosan ratios 1:1, 1:2 and 1:3 for formulations F1, F2 and F3 respectively. Coating of microspheres was done using Eudragit S100 (ES100) by solvent evaporation method.Pre-clinical study was done to determine oral safety dose of BV and LD50 using rat. The prepared microspheres were characterized by percentage yield, degree of swelling, surface morphology using scanning electron microscope (SEM), in-vitro release study and entrapment efficiency.Upon determination of its safety dose on rats; Results showed that the maximum safety oral dose appeared to be 64 mg/kg after preclinical investigation. The percentage of drug release study after 12 hours was found to be 82.35, 75.9, 60.26 % for the formulations F1, F2 & F3, with a percentage yield of 80, 89.1 & 92.35% respectively. The degree of swelling showed the ability of BV- ES100 coated microspheres to resist the pH in upper GIT. The microspheres were spherical shaped with a smooth surface upon scanning with SEM. In conclusion, the results showed that the coated BV-chitosan microspheres are a promising system for colon- specific drug delivery.

Supervisor: Assoc. Prof. Dr Reham Teaching Assistanť TA. Pakinam Zikry

Pharmacy: Pharmaceutics

Anticancer Activity of Cardiac Glycosides from Acokanthera Species with Emphasis on Their Mechanism of Action



Ahmed Abdeldayem 163087





Amr Said

160257



Mostafa Mohamed 162287



Mayar Avman 161183

## ABSTRACT

Cancer is one of the leading causes to death worldwide especially lung cancer of NSCLC type. Because of the severe side effects of traditional chemotherapy and its severe side effects, the attention now is directed towards identification of anticancer activity of natural products such as cardiac glycosides. In this study, the major cardiac glycosides in Acokanthera oppostifolia plant were isolated and then tested for several investigations of anticancer activity on A549 cells and also evaluated for effects induced when these cardiac glycosides were combined with the traditional chemotherapy regimens used for treatment of Non-small cell lung cancer. The plant was extracted by 95% ethanol then fractionation and isolation resulted in 500mg of white needle crystals of cardiac glycosides which were identified through NMR spectroscopy that indicate to a major cardiac glycoside called Acovenoside A. several anticancer investigation were done for the isolated cardiac glycosides and the traditional chemotherapy and for combinations of them as viability and cytotoxicity assays. Investigations on cardiac glycosides indicated to IC50 of 395.901ug/ml while IC50 of taxol and carboplatin were 66.07 ug/ml and 230.18 ug/ml respectively with significant reduction in cell viability. Same investigations were done for different combination protocola as taxol and carboplatin that result in reduction in cell viability to 87.5%, 85.38%, 95.4% and 95.67%. While other combinations that include cardiac glycoside with taxol result in reduction in cell viability to 32.3% but with carboplatin results in 49.15% cell viability.

#### Supervisor:

Prof. Shahira Ezzat

Teaching Assistant: L.A Heba Ahmed

Pharmacy: Pharmacognosy

In Vitro and In Vivo Anti obesity Activity of Nano Formulation of a Standardized Extract of Oolong Tea, White Tea, and Green Tea Together with their Metabolic Profiling



Youstena Youssef 160069



Andrew Ephraim



Michael Maher





Mina Diaa

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## ABSTRACT

Obesity is one of the most critical and common problems in our world. According to the WHO (2016) 1.9 adults (39%) are overweight and around 650 million obese. Herbal medicines have been used as anti-obesity for centuries as they are more affordable and have fewer side effects. Green (GT), white (WT), and oolong (OT) teas are derived from the same tea plant Camellia sinensis, but with different processing methods. The objective of our study is the evaluation of anti-obesity activity of the three types of tea through testing their pancreatic lipase and alpha amylase inhibitory activity. The dried tea leaves of each type were powdered and extracted with 1:1 ethanol (95%): water. The extract of each tea was evaporated under reduced pressure at 60°C to yield 109, 70 and 55 g of GT, OT and WT, respectively. Total phenolic content was found to be 474.2, 294.25 and 338.4 mg/g extract gallic acid equivalent, respectively. GT, OT and WT showed in vitro pancreatic lipase inhibitory activity with IC50 14.25±5.4, 15.45±4.2 and 16.5±4.5 µg/ml with respect to the standard orlistat 28.96±6.4 µg/ml, while the mixture of the three teas potentiates the inhibition action and gives IC50 of 14.2±3.9 µg/ml. For amylase inhibition, an IC50 of 181.79±8.5, 192.07±7.75, and 256.18µg/ml were found for green, white, and oolong teas, respectively, while the mixture showed potentiation of inhibition at IC50 of 176.19 ± 8.9 µg/ml. Where, EtOH extract showed significant antihyperglycemic effect and its metabolic profiling was studied using LC-MS.

Supervisor:

**Teaching Assistant:** 

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#### Promoting wound healing in diabetic rats



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ABSTRACT

Diabetes" mellitus is a heterogeneous metabolic "disorder which defined as an increase in blood" glucose "levels and it is a common cause of delaying the wound healing process. The aim of this study is to"" determine the effect of vitamin E and zinc separately and in combination on the wound healing process in diabetic rats. Wound healing passes through four stages: homeostasis, inflammatory phase, proliferative phase, and remodeling stage. The study was" conducted by using 12 male Wistar albino rats that were divided into four groups: (I) diabetic" control group, (II) diabetic rats" receiving vitamin E (400mg), (III) diabetic rats receiving zinc (5mg), (IV) diabetic rats receiving a combination of both zinc and vitamin E.Induction of diabetes was done by intraperitoneal injection of single dose of STZ (65 mg/kg)and after 72 hours blood glucose was measured. Two" cutaneous wounds were created at the dorsal:"region of the rats using a circular punch and treatment continued for fifteen days. Wound healing was assessed by the rate of wound closure estimation, determination of parameters such as ""MDA,TGF-B1,COX-2,IL-6,IL-10, and histological examination.

Supervisor: Prof.Dr.Amany Elbrairy **Teaching Assistant:** 

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#### A Metabolomics Approach for Early Diagnosis and Treatment of Osteoporosis



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## ABSTRACT

Chronic diseases resemble a tough challenge to both patients and health care professionals, one of the most common chronic diseases is osteoporosis. Osteoporosis has many causes and common usage of steroids or a decline in estrogen levels in postmenopausal females is more prevalent than other causes. The word 'Osteo' in Latin means bones and the suffix 'poro' means porous, where bone desorption rate is higher than bone formation rate leading to a decrease in density and mass of bones resulting in the possibility of developing fractures. Osteoporosis disease is challenging to diagnose as up till now no biomarkers in serum are known to specifically correlate to the disease or accurately estimate the risk of developing a fracture and to evaluate the efficiency of the administered treatment. Thus, a new and emerging field is required to discover specific biomarkers for diagnosis and evaluation of the disease.

Supervisor:

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#### Pharmacological Study on Using A New Drug For Management of Wound Healing In Rat Model



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ABSTRACT

#### A wound is any break or damage in the surface of the skin and the wounds can be accidental like burns, abrasions, skin tears, paper cuts. There are two types of wounds: open wounds (penetration and blunt trauma wounds) and closed wounds (hematoma, blister and crush injuries). Wound healing is an essential physiological and complex process in which the skin and the tissue under it regenerate and repair themselves after injury. There are four stages of wound healing Hemostasis, Inflammatory, proliferative and formation of granulation tissue and remodeling and maturation stage. Hemostasis stage responsible for vasoconstriction and blood clotting. Inflammatory phase at which body release inflammatory mediators to prevent contamination. Proliferation stage aims to reduce wound area and encourage blood vessels to carry nutrients and oxygen to wound area. Last stage is remodeling which interested in achieving maximum stretchable strength of the skin. Many factors affecting wound healing such as age, hormones, nutrition, infection and oxygenation. Management of the open wounds include stop bleeding by pressure, clean wound area and use antibiotic the covering to prevent infection. For closed wound applying ice packs and medication are the ways to relieve pain. paper, standardized photographs and video analysis.

#### Supervisor:

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#### In vivo study of Chrysin against Scopolamine induced dementia in rats



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## ABSTRACT

Alzheimer's disease is a dementia type that lead to memory, behavior and thinking problems. It starts by developing symptoms slowly then get worsen. It is world wide spread disease about 1 of 9 persons over the age of 65 are suffering from Alzheimer's disease (AD). The aim of our study is to prove the therapeutic effect of chrysin in treating scopolamine induced dementia. Scopolamine is a muscarinic receptor blocker which antagonizes effect of acetylcholine in cortex and hippocampus. Scopolamine also increases acetylcholine esterase, tau protein and b-amyloid protein levels which cause impaired cognition and cholinergic dysfunction. Chrysin is a hydroxylated flavone derivative found in many planets such as honey and propolis. Chrysin has a protective effect in brain through dampening the free radical generation which cause destruction of neurons, inhibits the release of pro-inflammatory cvtokines such as Tumor necrosis factor-a (TNF-a) and interleukin- 1b (IL-1b) in lipopolysaccharide (LPS)- stimulated microglia. The experimental design of the study consist of thirty male albino rats will be divided into 5 groups (6 rats for each group).Group one was the normal group, Group two was injected by scopolamine in 1 mg/kg dose for seven days in order to induction of Alzheimer's disease. Group three received donepezil in 2.5 mg/kg once daily for seven days as a standard group, Group 4: was pre-treated with Chrysin and Group 5 received Chrysin with donepezil at the same time.

**Teaching Assistant:** 

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# The possible modulatory effect of piperine on experimentally- induced liver fibrosis



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## ABSTRACT

Liver fibrosis is defined as failure of healing or repair in the liver tissue that is wounded or damaged, leading to accumulation of the extracellular matrix in the tissue. Liver fibrosis can eventually evolve into liver cirrhosis and liver cancer if not treated. Liver cirrhosis has a high mortality rate as it involves the loss of liver function. Liver scar formation is the characteristic mark for the fibro-genic response which began with production and deposition of extracellular matrix (ECM) proteins, which have changes on the liver architecture, mechanical and physical consequences, and also changes on the cellular functions. Liver fibrosis may occur due to many factors which include injuries due to alcoholism, hepatic viruses as virus B and virus C, diseases because of autoimmune response, parasites or disorders in metabolism. This experiment aims to Study the effect of piperine on experimentally-induced liver fibrosis. Liver fibrosis was induced in mice by I.P injection of thioacetamide for 6 weeks which can lead to the production of reactive metabolites leading to oxidative stress resulting in the progression of liver fibrosis while piperine was given for 21 days. Mice were used and randomly divided into 3 groups each containing 6 mice. Parameters like (ALT, AST, TGF-β, SMAD3 and Collagen) were measured to detect the liver functions and the degree of the disease. It recommends anti-oxidant, anti- inflammatory and anti-fibrotic agents which are ways to improve the liver state and treat the liver fibrosis. After this potent hepato protective effect of piperine, it recommends to see

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