

# CLAIC (Q) Liöimall





هدذا البرنامسج برعايسة



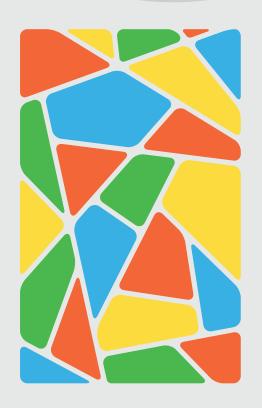
مؤسسة عبدالمنعم الراشد الإنسانية Abdulmonem Alrashed Humanitarian Foundation



























































# مقدمة

يهدف البرنامج إلى دمج طلبة الجامعة وطلبة التعليم العام (طلاب/ طالبات الثانوي) في مشاريع بحثية تصمم بواسطة أعضاء هيئة التدريس المتميزين ويتم تنفيذها تحت إشراف أعضاء هيئة التدريس بالجامعة والفنيين من كليات مختلفة مثل: العلوم والطب والهندسة والمعامل المركزية؛ وذلك لإكساب طلبة التعليم العام مهارات البحث العلمي وأدواته والتحفيز على الاكتشاف والابتكار بطرق علمية ومنذ وقت مبكر.

برنامـج علمـاء المسـتقبل يشـمل سـبعة مسـارات هـي: مسـار الـذكاء الاصطناعـي فـي الطـب (الجراحـة)، مسـار طـب التخديـر، مسـار الطاقـة المتجـددة، مسـار الهندسـة والتصنيع والبناء، مسـار الكيميـاء، مسـار الفيزيـاء، مسـار التقنيـة الحيويـة.

هذه المسارات تتناسب مع استراتيجية برنامج خادم الحرمين للابتعاث، والتي أطلقها صاحب السمو الملكي الأمير محمد بن سلمان بن عبد العزيز، ولي العهد «برنامج خادم الحرمين الشريفين للابتعاث من خلال ابتعاث الطلاب والطالبات لأفضل المؤسسات التعليمية في العالم في مختلف المجالات والدول حسب التصنيفات العالمية، في إطار رؤية المملكة 2030».

بحسب الإعلان على صفحة الجامعة وفي وسائل التواصل الاجتماعية تقدم للبرنامج عدد يفوق 190 طالب وطالبة، تم فرزهم على ثلاث مراحل واختيار أفضل 63 طالبة/طالبة تم توزيعهم حسب الرغبات في سبعة مسارات بواقع 9 طالب/طالبة في كل مسار.

# مسارات البرنامج

شمل البرنامج سبعة مسارات هي: مسار الذكاء الاصطناعي في الطب (الجراحة)، مسار طب التخدير، مسار الطاقة المتجددة، مسار الهندسة والتصنيع والبناء، مسار الكيمياء، مسار الفيزياء، مسار التقنية الحيوية.

# الهدف العام للبرنامج (المسارات السبعة):

- تعليم الطلاب على المعلومات والمفاهيم الاساسية بحسب المسار.
  - تنمية مهارات العمل الجماعي عند الطلاب.
- تدريب الطلبة على السلامة المهنية في المعامل والمختبرات البيولوجية، والكيميائية، والفيزيائية.
- تدريب الطلبة على أجهزة القياس وكيفية اجراء التحاليل والتعامل مع الاجهزة البحثية.
  - تنمية المهارات البحثية وكتابة الابحاث العلمية والبوسترات.
- تهيئة الطلاب وتحفيزهم للمشاركة في المسابقات والمعارض المحلية أو الاقليمية والعالمية.

# تسجيل الطلاب واختيارهم

- تقدم للبرنامج اكثر من 200 طالب وطالبة.
- تم عمل العديد من المقابلات للمتقدمين.
- تضمنت معايير الفرز والمفاضلة بين المتقدمين: (معدل آخر شهادة و درجة اختبار القدرات و اللغة الانجليزية).
  - في المحصلة النهائية تم اختيار 63 طالب وطالبة .
- تـم توزيـع الطـلاب الفائزيـن علـى المسـارات وبحسـب الرغبـات بواقـع 9/طالب/طالبـة لـكل مسـار.



# معلومات الطلاب/ الطالبات بحسب المسارات:

اسم الطالب/الطالبة	المدرسة	السنة الدراسية الحالية	المسار	مستمر/ منسحب
كيان صلاح ابراهيم المجحد	غادرت البرنامج	ثالث ثانوي		
حسن وجيه محمد المسبح	غادر البرنامج	ثالث ثانوي		
هدى فراس عبدالعزيز العويفير	مدرسة الكفاح	ثاني ثانوي		مستمر
احمد موسى احمد الاحمد	ثانوية عبد الله بن سلام	ثالث ثانوي	مسار الذكاء	مستمر
علي عبدالواحد عبدالوهاب الخرس	ثانوية عبد الله بن سلام	ثالث ثانوي	الاصطناعي	مستمر
عبدالإله جاسم محمد بوعبيد	مدرسة الأنجال الأهلية	ثالث ثانوی	في الطب (الجراحة)	مستمر
فهد عبدالمحسن عبدالعزيز الملحم	مدرسة الأنجال الأهلية	ثانی ثانوی	( = ,5=,=.,	مستمر
عمار محمد عبداللطيف العمير	ثانوية الإمام جعفر الصادق	أول ثانوي		مستمر
فاطمه عبدالرؤوف عبدالله العامر	الثانوية الثامنة بالمبرز	اول ثانوي		مستمر
نوره علي احمد المقرب		ثاني ثانوي		مستمر
حسين علي محمد العمران	مدارس الأنجال الأهلية	ثالث ثانوي		مستمر
خوله سعيد محمد بوعينه		أول ثانوي		مستمر
رضا جميل عيسى الخلف		ثالث ثانوي		
محمد عصام محمد العبدالمحسن	مدارس الأنجال الأهلية	ثاني ثانوي	مسار طب التخدير	مستمر
رانيه أحمد إبراهيم الحليمي		ثاني ثانوي		مستمر
زهراء حسين احمد الموسى		ثاني ثانوي	_	مستمر
يقين حسن ناصر العباس		ثالث ثانوي		مستمر
كادي محمد شميس الحارثي		اول ثانوي		مستمر
		1		
عبدالرحمن عبدالمحسن محمد الموسى		ثاني ثانوي	-	
فاطمة علي عيسى الخلف		ثاني ثانوي		مستمر
فاطمه أيمن عبدالمنعم العيثان		ثالث ثانوي	-	مستمر
مريم بنت عبدالعزيز بن خالد المحيش		ثالث ثانوي		
دانيا أمين عبدالله الغافلي		ثاني ثانوي	مسار الكيمياء	مستمر
حسين مصطفى منصور الغدير		ثالث ثانوي		
فاطِمة عبدرب الأمير سلمان البوعلي		ثالث ثانوي		مستمر
عبدالله مرتضى عبدالوهاب الخرس		ثالث ثانوي		مستمر
النور يوسف عايش البوصقر				مستمر



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اللجين سعيد محمد الوصيبعي	الانجال الاهلية	أول ثانوي		مستمر
نجلاء عبدالعزيز محمد فهد بن جلوي آل سعود	النخبة النموذجية	ثالث ثانوي		مستمر
هيله عادل عبدالوهاب العبيدان	الانجال الاهلية	ثالث ثانوي		مستمر
فاطمه أيمن عبدالمنعم العيثان		ثاني ثانوي	مسار	
خولة يوسف علي السالم		ثاني ثانوي	التقنية	
الجوهرة سلطان قاعد المفالحة السبيعي	التخبة النموذجية	ثاني ثانوي	الحيوية.	مستمر
أمجاد محمد معتوق الماجد	الثانوية الاولى بالمنصورة	ثاني ثانوي		مستمر
فرح أمين حسين الأمير		ثاني ثانوي		
آلاء علي جاسر الحريش		اول ثانوي		
		1		
عبدالوهاب مصطفى عبدالوهاب القفاص		ثالث ثانوي		
إسراء حسن عبدالله العيسي		ثاني ثانوي		
وعد العلي				
زهراء عماد محمد الغافلي		ثالث ثانوي	1	
نور عبدالمنعم جواد الدليلي		ثالث ثانوي	مسار الفيزياء	
محمد أحمد بن ناصر الحسن		ثاني ثانوي		
رغد عمر عبداللطيف الحمام		ثاني ثانوي		
جُمانة مراد ناصر الناصر		ثاني ثانوي		
نوف طاهر علي النفيعي		اول ثانوي		
		Г		I
نورة محمد إبراهيم العمر		ثالث ثانوي		
فاطمه اللويم		ثالث ثانوي		
عبدالرحمن باسم عبدالرحمن الملحم	الانجال الأهلية	ثالث ثانوي		حرمان
عمر عبدالعزيز عامر العامر	اكاديمية الكفاح	ثالث ثانوي	مسار الهندسة	مستمر
زينب رفيع عبدالله العليوي	الحادي عشر بالهفوف	ثالث ثانوي	والتصنيع	مستمر
الجوهره صالح ناصر الملحم	الانجال الأهلية	ثالث ثانوي	والبناء.	مستمر
منذر جعفر علي الجعفر	الانجال الأهلية	ثاني ثانوي		مستمر
فيصل محمد ابراهيم الصويغ	اكاديمية الكفاح	ثالث ثانوي		مستمر
أروى احمد عبدالله الحرز	الانجال الأهلية	اول ثانوي		مستمر
غلا حسين بن محمد الفهيد		ثالث ثانوي		
فاطمة علي أحمد الحجي		ثالث ثانوي		
تركي مهناء عبدالله الدلامي		ثاني ثانوي		مستمر
عبدالله محمد جمعه السنيني		ثاني ثانوي	مسار الطاقة	مستمر
هيثم هادي ناجع التليدي		ثالث ثانوي	الطاقة المتجددة.	
رغد المحبوب				مستمر
حسن بن علي بن محمد العمر		ثالث ثانوي		مستمر
حنين محمد أحمد الحسن		اول ثانوي		مستمر
	'/////// <del>/////////////////////////////</del>	//// <del>///////</del>	. / / / / <del>/ / / / / / / / /</del>	///////////////////////////////////////



# المشرفين على مسارات برنامج علماء المستقبل

المسار	نوع المشاركة	العمادة/الكلية	الدرجة العلمية	الاسم	٩
الهندسة والتصنيع	مشرف برنامج علمي1	إدارة المعامل المركزية	أستاذ مساعد	د. صلاح عبدالغني أحمد الحاشدي	1
والبناء- إدارة سلسلة الإمداد	مشرف برنامج علمي2	ادارة المعامل المركزية	استاذ دکتور	أ.د. خالد محمد أمين رمضان	2
الذ بال	مشرف برنامج علمي1	كلية العلوم	استاذ مشارك	د. فؤاد قاسم الغربي	3
الفيزياء	مشرف برنامج علمي2	كلية العلوم	استاذ مشارك	د. اسامة صابر يحيى محمد	4
a II a · a· II	مشرف برنامج علمي1	كلية العلوم	استاذ مشارك	د. اشرف يسن زكي خليفة	5
التقنية الحيوية	مشرف برنامج علمي2	كلية العلوم	استاذ مساعد	د. خير الاسلام محمد ابراهيم	6
.1 611	مشرف برنامج علمي1	كلية العلوم	استاذ مشارك	د. هاني محمد عبداللطيف أحمد	7
الكيمياء	مشرف برنامج علمي2	كلية العلوم	استاذ مشارك	د.محمد جوده عبدالحليم محمود	8
الطاقة المتجددة	مشرف برنامج علمي	كلية الهندسة	أستاذ مساعد	د. محمد عبدالعزيز أحمد العقيل	9
الذكاء	مشرف برنامج علمي1	كلية الطب	أستاذ دكتور	د. اسامه محمد زکریا محمود	10
الاصطناعي في الطب - الجراحه	مشرف برنامج علمي2	كلية الطب	أستاذ مساعد	د. محمد یاسر ابراهیم داود	11
طب التخدير	مشرف برنامج علمي	كلية الطب	أستاذ مساعد	د. خالد أحمد محمد يس	12





# المسار الثاني



التقنية الحيوية

# مخرجات المسارات

- 1. بوسترات علمية.
- 2. أوراق علمية تنشر في اوعية النشر العالمية والمجلات العلمية المحكمة.
  - 3. براءات اختراع.
  - 4. منتجات قابلة للتتجير
  - 5. المشاركة في المعارض المحلية والاقليمية والدولية.



# أولاً: البوسترات العلمية

عدد البوسترات	المسار	P
2	الذكاء الاصطناعي في الطب (الجراحة)	1
4	طب التخدير	2
6	الهندسة والتصنيع والبناء	3
7	الكيمياء	4
6	الفيزياء	5
3	التقنية الحيوية	6
5	الطاقة المتجددة	7
33		





Experimental evaluation of antioxidant and anticancer activi for Thyme essential oils extracted by different techniques

Aljawharah Saleh Nasser Almulhim

Prof. Dr. Khaled Ramadan and Dr. Sallah A. A. Al-Hashedi Engineering and Manufacturing Track









برنامج علماء المستقبل 2023



Separation , elucidation, antioxidant and anticancer activity evaluation for clove essential oils

Faisal Mohammed Al Sowayigh
Prof. Dr. Khaled Ramadan and Dr. Sallah A. A. Al-Hash
Paper
Engineering and Manufacturing Track















برنامج علماء المستقبل 2023



Future Scholars Prog

### A CODE FOR THE MASS ATTENUATION COEFFICIENTS OF THE GAMMA RAYS IN HUMAN TIUSSUES





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ecording to:  $\mu = -\frac{1}{\rho x} ln(\frac{N}{N_0})$ 

NO N G4 mg/KCOM1 650033 85543 0.1770 0.1786 1142738 1005038 0.1660 0.1663 1181979 1046960 0.1565 0.1564 1274199 1135435 0.1473 0.1469 235638 314691 0.0633 0.05491 196234 196038 0.0660 0.06474 180335 174692 0.0672 0.0672 1775390 97775 0.0644 0.06674

 Now
 N
 Text Get Model
 mg/SCOME

 0.8
 986003
 56448
 0.1752
 0.1752

 0.1
 1142758
 684081
 0.1646
 0.1649

 0.1
 1181797
 726351
 0.1689
 0.1579

 0.14
 2724199
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 0.1440
 0.1504

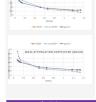
 0.662
 336838
 281086
 0.06561
 0.08511

 1.773
 186204
 161277
 0.0440
 0.08268

 1.274
 183503
 195529
 0.0814
 0.08268

 1.324
 144966
 0.050
 0.00851





برنامج علماء المستقبل 2023



Experimental evaluation of antioxidant and anticance activity for Basil essential oils

Arwa Ahmad Abdullah Alherz Prof. Dr. Khaled Ramadan and Dr. Sallah A. A. Al-Hashedi













### Antibacterial activity of basil essential oil (*Ocimum basilicum*) against foodborne pathogens

Omar Abdulaziz Amer Al-Amer lah A. A. Al-Hashedi and Prof. Dr. Khaled Ramadan

### Engineering and Manufacturing Track



\*\*Discretifisation\*\*\*Court of Dist serial cost on indicates for above the process of the process

Future Scholars Program 2023

# 

nos stains were incubated overnight at 37° C, and then were diluted by statis peptone (0.1% why to reach a court of 10° rient Ager (Dacid, UK) were tempered to 48°C (water both) prior to seeding with 199µ (10° CFUInt) of diluted culture from the trains were incubated (24h) at 37° C (5 discs per pilet, each in replicate oldes after incubation. The information of the

| Table Ch. | Seminary of Third | Seminary |

and S. Dauer F. (1995). The anticolobbs properties of Rely-basil and Colompal in Mar 7/20, 485-95. doi: 10.1196/j.mappia.2005.09.09.7.ph. 1 PMO 2006.728. Profess V. S. Aldes, S. (2015). 4 phrepharmacologoid hormous an Comuni apocios in manufacio. A Promoting Religion. 2010. 181–191.

برنامج علماء المستقبل 2023

# Reliably of Artificial Intelligence (AI) programs in proper wound measurement during disasters

Kadi Alharthi, Fatimah Alamer, Huda Alowifeer Professor. Ossama Zakaria



Artificial intelligence has gained more popularity in many life fields within the last	Wound type	Reliability
decades. It has proven to be very	Burn	99%
successful in medicine and surgery. It	Superficial wounds	98%
proved to be highly sensitive in the diagnosis and treatments of many	Deep wounds	96%
situations. This project aims to indulge the	Contused wounds	98%
Al program with a very primitive form of	Cut wounds	97%
Arduino drived software robot as an experimental trial to deal with wounds and burns during emerging disasters situations.	The taken phot than 550	

Disasters constitute a very challenging problem for markind. This may lead to many health or problems that need to be immediately dealt with to overcome morbidities and mortalities. Nevertheless, human beings might sometimes be in great human beings might sometimes be in great and great fitter, will clear with such problems. loobots have been proven to replace humans units grimliar situations such as the could 19 pandemic. Artificial intelligence has added much information to deal with may medical situations, notably, wounds and bustons. The current preliminary project was beiginged to test the efficacy of integrating a primitive robot that is a laided medical and surgical catastrophes.

### Materials and Methods

We adopted and Methods

We adopted a primitive from of the robot
(Arduino), It is mobilized by a remote control.
It is having a mobile camera. This mobile
camera would take photos and send them to
the Al program to be compared with the
previously fed images. Obtain the results
would be notified and accordingly dealt with
the program. A pecial designed AJ program
was set to diagnose different categories or
wounds and burni-related disasters. Five
main categories would be studied included
cut wounds, superical and deep ulcers,
burns, and contused wounds. Al data banks
cut wounds, superical and mobile
software and/or laptops, or desktops). Data
will be interpreted as regents the
would be interpreted as regents the
sould be interpreted as regents the
Statistical analysis would be used to measure
the success of the Al program.

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Discussions

Needs are is the drive for innovations. Through thire, war has alded in the discovery of many surgical technical adventures. Therefore, wars and disasters which are two faces of the same coin have led to the acceleration of many advances in wound care and trauma management with enormous investion of many advances in wound care and trauma management with enormous investion of many advances in wound care and trauma management with enormous investion of the age of the common strategienes. Resently, surficial intelligence plays a crucial role as a predictor and analytic successful tool in surgect brigges on battefields. All is not may be used as a successful tool for burn vickims by governing those who require immediate surgical intervention. This has led to overcoming the shortage of burn specialized surgeons during warfum. Successfully tred during the latest Russian-Usrainian war. The technique mainly reliable to the surgeon of the surgeon





The proposed artificial intelligence program seems to be highly effective and influential in the management of emergency disasters-related surgical situations. The number of used data is limited. Hence, further studies with larger cohorts may be needed for more precise information.



برنامج علماء المستقبل 2023



### Assessment of Natural Radioactivity in soil samples from King Faisal University and their radiological characterisation. Noor Al-Dalili

Supervision : Dr. Foued Gharbi

College of Science/Department of Physics



 $A(Bq/kg) = \frac{\frac{N_s}{T_s} - \frac{N_b}{T_b}}{\varepsilon Pm}$ 

 $Ra_{eq}(\frac{Bq}{Kg}) = A_{Ra} + 1.43A_{Th} + 0.077A_{K}$ 

All the obtained  $Ra_{eq}$  values (see table 1) are significantly less than the recommended safe limit value 370 BgAg. The mean value of  $Ra_{eq}$  obtained for the soil samples is 09.33 BgAg. It is very low compared to the safe limit recommended value. The external hazard index for samples under investigation is given by the following equation [2]:

 $H_{ex} = \frac{A_{Ra}}{370} + \frac{A_{Th}}{259} + \frac{A_{k}}{4810}$ 

is addition, the cuttor illustrations and in share-fixed in addition, the cuttor illustrations can be share-fixed value of a scalar relation beared index  $(H_A)$  very from  $H_A$  with a new solve of A. We deduce values or include a relative barrier fainties beared index  $(H_A)$  very from A and A

 $H_{in} = \frac{A_{Ra}}{185} + \frac{A_{Th}}{259} + \frac{A_k}{4810}$ 

The criterion of this model considers that the maximum value of  $H_{\rm loc}$  is equal to unity. The values of indoor radiation bazard index  $(H_{\rm loc})$  vary from 0.22 to 0.33 with a mean value of 0.26, which is less than the critical value of being less than unity ( See

index  $I_y$  was calculated according to equation [4]:  $I_y = \frac{A_{Ra}}{150} + \frac{A_{Th}}{100} + \frac{A_k}{1500} \le 1$ 

Its maximum recommended limit is 2 to fulfit the requirement of radiological safety. All the obtained values of this index for all the soil samples studied in this work were significantly less then 2 (Column 8 of table 1). Notably, I<sub>y</sub> was found to be between 6.48 and 6.5.



مؤسسة عبدالمنعم الراشد الإنسانية



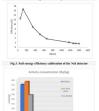


Fig 4. Average activity of <sup>234</sup>Ra, <sup>232</sup>Th, and <sup>49</sup>K (Bq/kg) in different regions of Saudi Arabia.

References
[1] K. S. Al Magree, Assessment of Statural Radiascristy Levis and Radiation Door Rate in Same Soil Suspice from Historical Area.

Assessment Science, 2015. 2, 30-327
[2] Krieger, K. (1981) Radiascristy of Construction Materials.

Betamerk, and Ferigical-Technic Concrete Precusing Flunt and Technicals, 2015. 40-454.

Nisti, M.B. (1997) Natural Radioactivity of Available Radiation Protection

PI – ACDC x 100% and by using PI, PVI is calculated PVI =PImax – PImin/ PImax X 100%. Laboratory IIb measured by Abbott CELL-DYN Ruby hematology analyzer (Abbott, Abbott Park, Illinois, USA). Study times During routine follow-up visit to the clinics. P < 0.05 indicates statistical significance.

# Correlation and agreement of hemoglobin concentration measured with non-invasive rophotometric method to hemoglobin concentration measured with cell analyzer in sickle cell disease patients. A diagnostic test accuracy



خالد أحمد بس جامعة الدلك فيصل استاذ التخدير كلية الطب جامعة الدلك فيصل ter Research Team: eb, Abduluziz Bushchab

### Materials and Methods

- Patients was ...

  Glessoe center in Al-Ahasa lor Rossoincluded.

  Spith, Pletit variability Index (PVI, %) and
  Perfusion Index (PVI) measured via finger probe
  sensors (Measino Radical T, Irvine, CA, USA).

  Back of the Company of t





# دراسة تشخيصية و دقيقة للقياس اللا اختراقي لتركيز الهيموجلوبين بالدم و علاقاته و انقاقه مع القياس المعطي في مرضى الدم المنجلي

158 patients enrolled (26th Jan 2023 - 1st May 2023). Table 1. Represents demographics, SpHb (g/dL), lab Hb (g/dL), PVI (%) and PI

A good degree of reliability observed bette (g/dl) and SpHb (g/dl) (n=151 readings) II Correlation (ICC) was 0.671 and 95% CI 0.74), p<0.001, Figure 3.

High mean PVI was 16.73 ± 7.69 % and low mean (SD) of Perfusion index (PI) was 2.52±1.7. The PI,

weak correlation between PVI (s) and Spth (g/d), r = 0.049, p=0.54 and PVI (=0.36, p=0.001). Mean (SD) SplD concentration (11.10 + 1.43 g/d), p=0.001 with a range of bins (SSE) ± 12 (-3.11 s) (s). Pollowing to the bins (SSE) = 1.73 g/d), p=0.01 with a range of bins (SSE) ± 12 (-3.11 s) (s). In contrast to benülty counterparts with normal hemoglobin. Figure 4.

Table 1. Demographics and laboratory data



SpHb consistently higher than laboratory Hb concentrations and PI results were significantly low, in contrast to healthy counterparts with normal hemoglobin.

More investigations among a larger population still needed to confirm the effect of PVI changes on measured SpHb concentrations.

Sweek P, Pickering B, Farris L, Regers ZR, Bechanis GR, Evaluation of Newinner's and Continuous Humoglobis Montaving in Children with Solds Cell Disease. Proceedings of the 2011 Annual Manage of the Central Continuous Cen Al-Albahori MK, Al-Hashim A, Johom Z, Al Tarsi K, Al-Hassini M, Alliyumi KZ, Al-Kampani N, Dan S, Walidaini of a Nion-Intraviv Hamagli-bin Extension in Patients with Salds Cell Domes Blood 2012;120 (2): 4778. doi: https://doi.org/10.1115/2014/17.2013.07.1079.

Berdreiffe Y, Bul A, Demir Versightsler F, Ergenel E, Geier K, Karamanner H, Bul U. Nozirvenira Beneglebin Manuzement Robus bevaries Procedure in Thalassemia Patients. Hercephin. 2022 Mar. 49(2):55-99. doi: 10.1109/0503020

رنامج علياء المسطيل 2023





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# s Power Transmission of Solar Energy from Space Mariam Almohish Dr Mohammed AlAqil Paper Renewable Energy Track











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برنامج علماء المستقبل 2023



### Mariam Almuhaish, Hancen AlHassan, Rand AlMahboob

Dr Mohammed AlAqil Paper



Renewable Energy Track



**Future Scholars Program 2023** 









Preoperative screening for anemia prior to anesthesia induction with noninvasive spectrophotometric hemoglobin compared to laboratory hemoglobin concentrations. A prospective observational study تعدف و الاستون من تالوبياني المرابع للأقلاق و معنواني التعديد و الاحتراب منظانية تستر الإساب الإسهاب الإسهاب

# introduction ment of hemoglobin (Hb) concentration is an diagnostic tool for patients prior to surgery. ey Hb provides accurate measurements, but time and blood sampling. Nontinvasive hotometric haemoglobin (SpHb, pdH) is a us real time Hb concentration monitoring.

for extremely strong pulse.

AC/DC x 100% and pulse.

AC/DC x 100% and primax X 100% ligure2

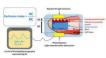
Primax—Prima Primax X 100% ligure2

s displayed as a percutage (numerical value), ratory Hb measured by Abbott CELL-DYN Ruby tology cell analyzer (Abbott, Abbott Park, Illinois, lifeure3.

Figure 3.

t measurement during routine follow-up is. P < 0.05 = statistical significance.







Results identified 32.3 % of males and 60.3 % of f



Jan Hollin XXII Politic 

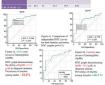


الكشف و التحري ع ولمنعة عبدالمنحارات الإسابية متفاسط المنطقة المستقدية إذراء حسين الموسى مدارس الاجهال الأطبية وقن حسن العباس الثانوية الساسه بالميرز الأحساء

PRINCES OF THE PRINCE To the state of th Figure 9s. Mean Hemoglobin difference between noninvasive homog Hemoglobin (SpiRs-dRs) minimally affected by perfusion index (FI)

Table 2. Cut off to diagnose anemia with Splift. CBC: Laboratory complete blood court Fth: hemoglobin concentration as measured by complete blood court. Splift.

	10.2	12.5	91.3	68.1	23	6.775	
	11.3	10.3	61	75.9	76.1	E844	
	129	12.5	52.2	76.N	51.5	1.54	
	11.3	10.3	81	81.3	75.9	6.00	
1000	-	-					DI BI



- of females were anemic prior to their elective surgery.
- Low sensitivity and high specificity allows SpHb to be used to exclude anemia prior to surgery
   Mean Difference between SpHb and IIb (gdL) varied from positive to negative depending on the laboratory IIb

Phillips MR, Kheary M., Botton W. Marzinsky A. Short KA. Cairos BA. Chados AG. Joyner BE. Pr. McLean SE. A metavosine hemoglobin nonitor in the polastic intensive care unit. J Sung Res. 2005 May 1,195(1):257-42. doi: 10.1006/j.ps.2014.12.051. Epub. 2005 Jan 9. PMED. 27247AS; ISBACD IMSC/S0224E.

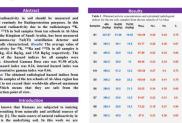
Vos II, Kalmar AJ, Stosys MM, Peste RJ, Wettasch IK, Scheurer TW, Hendriks HS. Accomey of non-invasive measurement of homoglobin-concentration by paths on-invasive measurement of homoglobins concentration by paths on-dynamic conditions in loss supply. Br J Associal. 2012 Oct; 1994;1522-8. doi: 10.1007/bio.com/21. Erus/s.1212-3.02. PMED: 2022-2023. Zung R, Svenner CH, Li H, Xu X, Skoog Southery, A, Liu H, Li Y, Shangguan W, Liut Q, Can toutrensive hemoglobin measurement roduce the twelf for prosposative components in politics colopionic outper? P bandon: Amonth. 2017. Doi: 2011.11.1131-1155. doi: 10.1111/jour.1202. ppd. 2017.5-pg. 3-19502. 2049.001.

THAT Mul

### Assessment of Natural Radioactivit in schools' soils From AL-Ahsa region, Saudi Arabia Abdulwahab Mustafa Alqaffas

Supervisor : Dr. Foued Gharbi

College of Science/Department of Physics









Equations of the radiological indices [2,3]:

 $I_{\gamma} = \frac{A_{Ra}}{150} + \frac{A_{Th}}{100} + \frac{A_{k}}{1500} \leq 1$  $H_{int} = \frac{A_{Eq}}{185} + \frac{A_{Th}}{259} + \frac{A_k}{4810}$ 

 $H_{ext} = \frac{A_{Ra}}{370} + \frac{A_{Th}}{259_{so}} + \frac{A_k}{4810_{yord}}$ 

All the obtained  $R_{\rm eq}$  values (see table 1, and figure 2,) are significantly less than the recommended worlrishing safe maximum limit value of 370 Bayky 1]). The mean value of  $R_{\rm eq}$  obtained for the studied soil samples in this work is 9.18  $R_{\rm eq}$ , it is very low compared to the safe limit recommended value. "K appeared in all samples were also found to have an activity concentration less than the worldwide average value (412 Bayky) 3].





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g. a. Litterinery contrastant curve on the devices:

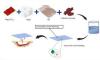
Table 2. Comparing the conveniencies of natural radioactivity (19QNX) 1) in soil cample
the current study with a previous study reported from different cleics in the Kingdom's Sould Arabbe.







Magnesium ortho-vanadate / magnesium oxide/ graphene oxides embedded through cellulose acetate-based films for wound healing application Student Name: Dania A. A. Algafly.
Supervisors: Dr. M. Gouda, Dr. Hany M. Abd El-Lateef Chemistry Department, Callege of Science, King Fabal University Pagartment (2023), 176–2786, 07 Gross themistry as Westing Rifestication track.



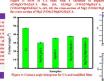














Figure 7: Cell viability of Mg3( normal long cell line

برنامج علماء المستقبل 2023



Preoperative correlation and agreement of non-invasive spectrophotometric temoglobin to laboratory hemoglobin concentrations. A diagnostic test accuracy تراسخ تشغيصة أو دقية للشياد الم يلاقيل كاري الإنجازي بين الإنجازي المثال المعالى ا

Materials and Methods

oved by Al-Ahsa health Cluster (IRB KFHH

oS-HS-065) IRB Log No: 08-EP-2023.

its scheduled for elective surgery at KFHH,

(269 Jan 203 - 19" May 2023)

(g/dl.) and Pleth variability Index (PVI, %)

erfusion index (PVI) measured via finger

sensors (Masimo Radical 7, Irvine, CA,

ory Hb measured by Abbott CELL-DYN ematology analyzer (Abbott, Abbott Park,







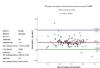
A positive correlation existed between Hb (g/dl) and SpHb (g/dl). Kendall's tau correlation (τ) (n=151, τ = 0.674, p< 0.001), Figure 2 and Table 2.</li>

Negative low correlation existed between PVI (%) and SpHb (g/dl), τ = -.312, p=0.001. Table 2

Table 1. Demographics and laboratory data that includes spectrophotometric haemoglobin (SpHb, g/dl), laboratory haemoglobin (Hb, g/dl), Pleth variability Index (PVI, %) and Perfusion Index (PI) of studied patients.







SpHb relation to the increased PVI % as a rest fluid restriction prior to surgery need fu investigation among a larger population.

رنامج علماء المسطيل 2023







### Smart Solar PV Cleaning System to Enhance RES Reliability

### Turki Aldulami, Abdullah Alsunayni Dr Mohammed AlAqil

Paper

Renewable Energy Track



### Materials











### Smart Solar PV and Wind Turbines Monitoring System

### Abdullah Alsunayni , Turki Aldulami Dr Mohammed AlAqil Paper

Renewable Energy Track













برنامج علماء المستقبل 2023

ىزاللە



### in vitro antibacterial activity of Thyme (Thymus vulgaris)



Materials and Mathods

1. Bacteria and growth media
Bacteria arising MVP and DSM strain year da indicators for
priving essential or leadured for in vita amministration datafiles
are shown in Table (1), Lactic and Dadarias (LAB), reference
in Sam state in Table (1), Lactic and bacterias (LAB), reference
in Sam state inflacence (SRH) borth (Lond, UK) at 37°C ±1" to
28°C ±1" MVP at 18°C ±1" MVP at

side or later charges were installent and activate brownly by many pre-moting years undergo and charges asserting at 1870.

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Future Scholars Program 2023

against foodborne pathogens

Munthir Jafar A Aljafar

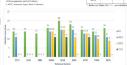
Man A. A. Al-Hashedi and Prof. Dr. Khaled Ramadan
Paper

Engineering and Manufacturing track

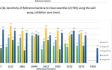


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| Path | Path









Togracus et al., (2023) reported the TEO has arthocardia solutides against pathogenic bacteria locitated from the hospital patients, such as Entercoccus feedels, Surella forticuis, Stephylococcus aureus, (Nicitaella presumorieus, E. coli, and Entercolorce energone and Informatisted a consideratio artifacturial activity with minimum inhibitory concentrations (MO) from 2 to § Livilis, agents all artansis except Staphylococcus aureus (MO ~ 32 µLivilis, whereas the highest hibitory effect for thyre leaves and demo-sessertial of was imposed on Khabalok, Escherichia coli, and Staphylococcus aureus, and the largest inhibitory active diameter of cessertal of appeared against growth Salmonella panelpyti 8 (Methable et al., 2021). Tagnaput et al., (2023) reported the TEO has antibacterial

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Future Scholars Program 2023

# Manipulating stability of chitosan films by the addition of tungsten, magnesium, and graphene oxides for biomedical purposes Student Name: Fatimah Alaithan

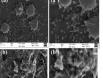
Supervisors : Dr. Hany M. Abd El-Lateef, Dr. M. Gouda

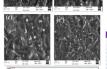
Paper, Under review
Chemistry Department, College of Science, King Faisal University
Green chemistry and sustainable development track





















# Potential probiotic characteristics of bacteria from Asfar Lake and their antimicrobial activity against bacterial pathogens Najla Absaud and Hela alobaidan Dr. Ashraf Khaliff and Dr. Hairrul Islam Mohamed Paper/ Patent

Biotechnology



A microbiota in lake environment has rich source of incharacterized microbes. In this study three isolates ASF-1, ASF-2 and ASF-4 from the Al-Asfar lake, Al Ahsa Lake were isolated. They were active against high pH and hydrophophobic characters. The isolates were further screened for fermentation capacity of

were further screened for fementation capacity of Hasavel rice. The active proteins was evaluated for antimicrobial activity. It showed potential antimicrobial components extracted from probiotic femented http://discourse. Al Ahna casis of desert has unique and beautiful liske system, has an exceptional importance at national and international levels. This water body, which once international revess. This water body, which other considered as skine source of water is now increasingly being abused and severely polluted. The aquatic systems are mostly dominated by bacteria and fungi and in the natural environments micro-organisms have very specific roles with regard to the

recycling of materials and purification of water.

The fermentation of rice is carried out by lactic acid bacteria (LAB) like Lactiplantibacillus planfarum Lactobacillus delbrueckii (Pabari et al., 2020). About Lactacealus debruació (Patani et al., 2020). About 100 g of fermende sour rice corclairs 7.31 mg iron. 839 mg potassium, 303 mg sodium and 850 mg culcium. Fermented sour rice corclains an increased amount of vilamine. Somplex and vilaminer. As and is also regarded as a high energy-rich and body rehydrating bodin this study, probletic characteristics bacieria used for Hassavi rice fermentation and bio components were extraded and evaluated for international and the components were extraded and evaluated for extractional productions. antimicrobial activity and protein rice components.

Materials and Methods

Isolation of pure colonies.
The pure colonies were isolated in new plate and inculate 37° Ce 48 hours.
Fermentation with Hasawi rice for 15 days
(Ret (20) g) was then homogenized with 22 mL of termentation media. The inoculum of the three termentation media. The inoculum of the three particulated at 37° for 24 h.

Quantification of total protein.
Done using Bradford reagent.
Antibotic sensitivity assay assperformed by the first of the colonies of the

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Antibiotic discs were placed on freshly prepared lawns of each isolate on Mueller-Hinton agar (MHA) plates and incubated for 24-48 h at 37 ° C. Gentamicin (120 µg), Amikacin (30 µg), Ciprofloxacin (5 µg), Methicillin (5 µg), Stroptomycin (10 µg) were studied in this study.

Extraction of antibacterial agents and evaluation of their antagonistic activity against Stephylococcus aureus, Salmonella typhi, S. enterica













One important feature of the probiotic bacteria is their ability to secret bioactive compounds that can kill or admity to secret robactive compounds shart call fall of suppress the growth of pathogenic bacteria. In this study, the two bacterial isolates from Al Asfar Lake that fulfilled the probiotic standards, displayed significant named use procosous sariants, uspages significant sensitivity towards certain common antibiotics including Amiliacin (20 ug/disc), amplicillin, streptomycin and ciprofloxacin. The two active isolates showed sensitive against all the tested antibiotics and showed <10 mm zone of inhibition in agar plate method. The significant isolate has been sele further fermentation of Hasawi Rice in order to assess its ability to generate unique bioactive proteins with potential therapeutic activity against inflammation. The extracted protein from probiotic-fermented. Hasawi rice showed bioactivity against bacterial pathogens ( Salmonella and Staphylococcus aureus.

Conclusion Novel bioactive protein was obtained from probiotic-fermented Hasawi rice. Further In vivo study using the selected proteins was conducted in inflammation-induced mice model

Chahad OB, El Bour M, Calo-Mats P, Boudabous A, Barros-Velázquez J, Discovery of novel biopreservation agents with inhibitory effects on growth of food-bome pathogens and finet application to seated products. Res Microbiol. 2012;18(1):14–5.1 (1016) jamenic 2011 (8.00).

Khalifa A, Sheikh A, Ibrahin HM, Bacillus anyloliquafaciens Enriched Carnel Milk Atlenuated Colliss Symptoms in Mice Model, Autrients. 2022; 14(9):1967. https://doi.org/10.3390/ins/1491997

برنامج علماء المستقبل 2023



Validation of mass attenuation coefficient for polymethylpenten, water, cement, concrete, gypsum and brick, using Monte Carlo method with Geant 4.

Zahra Emad Alghafly Supervision :Dr. Foued Gharbi

### College of Science/Department of Physics

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mary Generator Action Class: used to generate tary kinetics of primary photons (energy and



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Figure (a) illustrates a visualization of the realized virtual experiment -Narrow beam Beer Lambert experiment in action using Gean14 software, this experiment is based on Equation (1):

### $N = N0 e^{\mu x}$

$$\mu = \frac{-1}{\kappa \rho} Ln(\frac{N}{N0})$$
 is the density of the material

3. Resolution effect:
The energy resolution (Re) of a deector measures its ability to distinguish gamma-rays with close energies and the ability to distinguish between two peaks.
We did ran with resolution and without resolution the developed Geard eode (res=0), because we the resolution can distort the results.



### N is the gamma ray counts which penetrates the sample without interaction and totally absorbed inside

sample without interaction and totally absorbed inside the detector.

No is the gamma ray counts totally absorbed inside the detector without the presence of the sample.

z is the thickness of the sample.

$$\mu = \frac{-1}{\kappa \rho} Ln(\frac{N}{N0})$$
 is the density of the material

### 2. XCOM:

c. ACOM: Comparison between mass attenuation coefficients for the polymer and building materials using XCOM software online and Geant4 code at various photon engergies.

 $RDV\% = \frac{(\mu/\rho)Geant4 - (\mu/\rho)xcom}{(\mu/\rho)xcom}$ (3)

For all the standed sunpels polymetriplecene, water, agrouns, first and comeon) we found that we are grouns, first and comeon is found that we are conclusing results by other andrew using Good St. (Moster) [1]. MKNP [1] (Singh) and to experimental results from Genet, XCOM program and Medham (Singh St. (Moster) [1]) (Singh) and to experimental results from Genet, XCOM program and Medham (Singh St. (Moster) [1]) (Singh) and the control of the control of the detector provides a flower subtraction of the detector provides a closer subtract properties and the detector of the detector provides of the detector provides of the detector provides of the detector provides and the detector provide

[4] Singh VF, Shimurdi SF, M. E. Mothat Endigor NM, Determination of must attenuation coefficient for some polymers using Monte Carlo simulation, Vaccum

[3] Aldrey, M.E., Alzelmani, J.S., Saysed, M.E., Abbas, M.E., Tiddavich, D.E., Elsath, A.M.; Elsafi, M. Gamma-Ray, Attensation and Exposum Building Factor of Newd Polymens in Statisting Using General Standards. Marchib 2021, 14, 2021.

برنامج علماء المستقبل 2023



Carboxymethyl Cellulose based hydrogel decorated with Ag/Fe nanocomposite and its Electro-catalysis of 2,4-Dinitrophenol



Introduction
In recent years, water committee than grown to be a serious man [1]. Additionally, the US Terrorisonal Proceedings and Additionally, the US Terrorisonal Proceedings and production. The consideration of polyalectomes restor, plants, fragments, tenthes, and persolates restored proceedings are used to density phendic composeds, which are commissions to pollute along the continuence of the proceedings are used to density phendic composeds, which are commissions to pollute about the committee of the com





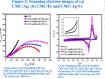
nanocomposite and its Electro-catalysis of 2.4-Dinitrophenol application
Studen Name: Fatimah Ali Alkhalaf
Supervisors: Dr. M. Gouda, Dr. Hany M. Abd El-Lateef
Chemistry Department, College of Science, King Faisal University
USA patent, Filing Confirmation No. 9501
Green chemistry and sustainable development track



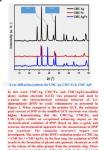












برنامج علماء المستقبل 2023



### Artificial intelligent aided in medicine

Professor.Ossama Zakarya Ali Alkhars-Ahmed Alahmed-Fahad Alma Ammar AlOmair-Abdullah Buabid

Integration of Artificial intelligence (AI) to a primitive robot module to the management disaster conditions



Natural disasters such as volcanos, earthquakes and buildings fallings pose a great challenge for medical and paramedical team. They usually result in devestating outcomes. They may also lead to severe morbidilles. Trainge is a known protocol to deal with multiple injuries during disasters. The main challenging issue in traige is the medical team shortage. Therefore, we to see that the medical team shortage. Therefore, we do not consider the problem.

Many trials were avocated to make the triage system more successful despite of manpower shortages. Recently, it has been successfully performed during the Resissa-Ukrainia war with highly promising outcomes. Afficial intelligence (A) is the main proof for this mechanism. This is based on the notion that A was exchanged to the state of the notion that A was such as car production, medical instruments for diagnosis and/or even treatment of some tumors. It also proved to have a paramount role during the Covid-19 global pandemic saving the life of the medical team and controlling the propagation of the disease. The current work similed to gauge the effectiveness of an Al aided primitive robotic module in dealing with medical and surgical situations during disease.

Materials and Methods

An experimental triage took place evolving a preliminary module that is based on sharing photos taken via a robotic camera in relation to an Al loaded bank of similar images. Correlations between the taken photos and the Al stored data would take place aiming to evaluate the sensitivity and volatility of the obtained results



Based on a bunch of photos that were fed to the Al program, wounds were categorized into different subtypes. These include, burn wounds, cut wounds, surgical wounds, and deep and superficial ulcers. The module would take photos for different similar categories. The reliability and validity of the program proved to be higher than 95% within the five studied categories.

Robots are currently gaining popularity in the medical and surgical fields.-[Barakat-johnson et al., 2022] Clinicians and patients are mostly admiring the newly advocated AJ programs in medical and surgical diagnosis and treatment. Nevertheless, it is a high-priority hot topic in the management of battle and disaster fields with highly encouraging results





hnson, M., Jones, A., Burger, M., Leong, T., Fi . & Coyer, F. (2022). Reshaping wound care:

ture Scholars Program 2023





### Antibacterial activity of clove (Syzygium aromaticum) essential oil against foodborne pathogens

Zainab Rafee Abdullah Alelaiwi ah A. A. Al-Hashedi and Prof. Dr. Khaled Ra



Paper
Engineering and Manufacturing Track

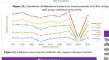


Activity Spectrum of Clove essential oil (CEO)
 Arrancockal activity for CEO were screened using the agar well (Clock). Util were israpered to 49°C (water both) prior to seeding incolution demaid were powered into first plates (in regionals) then the agar with a startie Cox borrer (statistics sides borrer) and each min to allow diffusion of CEO: Inhibition cones (including well date into allow diffusion of CEO: Inhibition cones (including well date.)

			R	esults								
Table (T). Indicator be	eteria used in the	Galo	Table (3)	Dinner	er of label	nition rose	n (man) i	iw natibi	rtic disc, a	agazinet ret	lecences	
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el delirenda selep. Selperces DIM 1 2001 1.001			Assessed		pegarine i			pecitive i			(LAB)	
Lantesourus Einte saltep, Einto Streptopeocus thermostiffus	AECC* 1999 DSM 2002	STIT	-	3576	PASS	EC22	SSES	5413	1.5644	1.001	11.55	STI
Pethogenic and Spoilage Dectoria				0.76	-	17	13	1.2		12	14	12.
Listeria monocytogowa Stophylosocow steren	ATCC 1984 ATCC 29813	5A17	Chrompte and Chap	25	-	25	20	19	24	22	**	22
therefores AFCC	ADCC 1993 ADCC 1993 ADCC 1993	5507 FC22 PASS	Character Character Admitted	24	-	24	28	30	23	28	32	32
Solmonelle enterior	AZCC 13006	NE26	Range to	4.7		28	12	20	2.0	8.0	20	1.2
DEAD, Florinke Sanstong on Microsy Microsperious and Cell Cultures.	enteriors and Fallbaltano	o, German Collection	175.00 175.00 185.00	24	13	28	26	24	24	24	20	19
AFCC, American Type Celtura Collection.			L. Budge by T	Sept. 153. "	- more	Address O or	a show on	The Contract of the Contract o				

			Bacteria (				Lact	ic acid ba (LAB)	teria			STEEL STEEL
CEO	Gram	negative b	acteria	Gran	positive b	acteria		(LAB)		0		0
	SE76	PA53	EC22	8805	SA13	LM44	LB81	LL55	ST17	5772		1170
14 g/L	14	20	21	15	22	16	18	19	15	A STATE OF		1
2 g/L	12	15	15	12	19	14	12	-	12		(O)	-
6 g/L	-9	13	11	12	15	12	-	-	-			
3 g/L	-	- 11	-	9	12	-	-	-	-		es of inhibition co	





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Clove exserted oils were auther in inhibiting E. cold ATCC 29022.

Discussion IDCESS Shift sh



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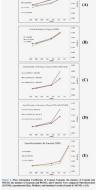
ss attenuation coefficients for Gamma-rays in building n Application for Saudian building materials

Mohammed Ahmed Alhassan

Supervision: Dr. Foued Gharbi College of Science/Department of Physics











برنامج علماء المستقبل 2023



### Natural radioactivity in Saudian Building Materials

College of Science/Department of Physics





Obtained activity concentrations and determined radiological indices for the studied samples of Building Materials are illustrated in Table 1.

Table 1. Obtained activity concentrations and calculated rar relative to the studied Saudian Building Materials.

	Samples	(8q/kg)	(84/kg)	(84/kg)	Racq	Hex	Him	Samples
	Comt1	143.63	42.23	35.87	93.60	0.28	0.40	0.37
	Cernt2	213.42	13.71	15.29	64.25	0.22	0.25	0.29
	Comt3	280.75	49	28,07	89.22	0.30	0.43	0.40
	Cemt4	318.92	29.79	12.55	47.81	0.20	0.28	0.27
	Sand1	328.67	19.18	57.17	101.01	0.34	0.39	0.46
	Send2	374.44	29.68	18.35	56.00	0.23	0.31	0.32
	Sand3	376.48	43.18	24.34	78.06	0.29	0.41	0.29
	Sand4	481.44	11.38	35.95	62.87	0.27	0.30	0.38
	SandS	320	11.2	72.67	115.20	0.38	0.41	0.51
	Gyps1	302	11.01	29.11	52.71	0.20	0.23	0.28
	Gyps3	288	28.31	17.95	54.06	0.21	0.28	0.28
	Gyps4	205	28.65	29.87	71.44	0.24	0.31	0.31
ı	Average	302.73	26.44	33.10	73.85	0.26	0.33	0.35





مؤسسة عبدالمنعم الراشد الإنسانية





Conclusion

PRA, TIPT had "N about 50 concentration has been researced in a collection of 12 samples of Building Mentales from the local markets at AL-Axias region. Obtained activity concentrations seen in the auditorial from the local from the radiological which have been studied are then found to be safe from the radiological point of view.



### Immune modulatory effect of probiotic bacteria on

Amjad Almajed and Aljawharah Alsubaie

Three active probiotic bacterial isolates; ASF-1, ASF-2 and ASF-4 from the Al-Asfar lake, were screened for anti-inflammatory activity in in vivo mouse model Edema was induced with 1% carrageenan. After 8 

The use of probiotic bacteria in dietary supplements is widely documented in the literature. Lactobacillus sop wively occurrented in the interfacture. Euclodectures spin-have been used against marry disease conditions. Probiotic characteristics microbes also known to express its antimicrobial, immunomodulatory and express its anti-arthritic properties. About 70-80% of the world's anti-arthritic properties. About 70-80% of the world's population demanding the nonconventional drugs strategies. In vivo approach of probiotic products will able to reduce the acute inflammation induced by carrageenan when tested in male mouse. In this study, carragement when research in their indice, it was solvaluated against carragement induced paw edema in Balbic mice and analyze the contribution to the upregulation of the powerful immunomodulatory agents.



Potential probiotics cultures were scre vitro characteristics tools. The active culture was used for Hasawi rice fermentation.

Preparation of prebiotics from probiotic fermented

hasawi rice.

fermented Hasawi rice were extracted and quantified the protein content using Bradford reagent assay. Antioxidant analysis was done using DPPH. Assessment of the anti-inflammatory activity with code of ethics of King Faisal University

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### inflammation in the mice model

Dr. Ashraf Khalifa and Dr. Hairul Islam Mohamed Paper/ Patent Track Biotechnology

Experimental protocol
The experiment lasted for 8 days . The BathC mice
were groupd as follows (in 6 per group); (i) Group A
cisaline control), (ii) Group B (carrageeran control), (iii)
Group C (informethecin group, a standard ansiinflammatory model), (iv) Group D received 1 mg of
DRES are contensority. PRE as oral gavage fluid.

Induction of rat paw edema using carrageenan
On day 1, 100 µL of fresh (1%) carrageenan solution
was injected into the right hind paw of each mouse.
Cytokines and inflammatory marker estimation The inflammatory cytokines, IL-6, IL-1beta and TNF-

The hind paw of tested mouse was used to histopathological evaluation of the formalin fixed











method for assessing inflammatory responses to antigenic challenges. Our results showed statistically antigenic challenges. Our results showed distriction, significant decrease in pws thickness at P < 0.05. Problotic bacteria modulate the expression of genes associated with inflammation, along with a few disease-responsive cytokines, such as I.e., 1.17, IFN-gamma and TGF beta. Histophological studies revealed reduction in issue damage in the teach group. Problotic-formetted rice generated certain proteins that have substantial impact in suppressing Para. Editor. Toward fortifer some histopherical State Association. Paw edema. These findings open the door for

Recompatible problem indexing formulation Bocompatible problem and indexion. Future commercialization of this problem indexion. Future commercialization of this problem in the for boosting households of a premium importance. 

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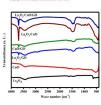


# Chemical, surface, and thermal studies of mixed oxides cupric oxide (CuO), lanthanum oxide (La<sub>2</sub>O<sub>3</sub>), and graphene oxide for superior dye degradation from aqueous solution

Mohammed N. Almarri\*
Dr. Hany M. Abd El-Lateef, Dr. M. Gouda,
College of Science/ Department of Chemistry
nal of Materials Research and Technology (2023), IF= 6.267, Q1







Future Scholars Program 2023





Element Weight % About 5% C.K. 32.09 SL27 O.K. 31.67 37.39 Lal. 1.21 0.17 Co.K. 35.03 91.58

Temperature (C)
Figure 6: Thermal analysis of CaO, La<sub>2</sub>O<sub>p</sub>, and GO-based compositions

برنامج علماء المستقبل 2023



### On-Road Smart Charging System for Electric Vehicles

### Haneen AlHassan Dr Mohammed AlAqil Paper



oyamically, To improve EV and sustain the environment. Dynamic changing method life "wireless changing" are used. The main principle of wireless changing is to trainment power with the high of by deciromagnetic field between the coals by using this histories power brancher believy are inchanged through transformer winding placed at the bottom of car and other placed under the road. This would greatly increase the range of EV making it suitable for long drive & efficient too. Or Road Dynamic IFT Charging Lane

Monag Charge Charge Charge Discount Fad Fad Fad Fad Fad

per specially presents an evaluation on how future EV ment and Wireless charging methods can be



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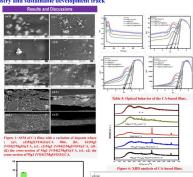


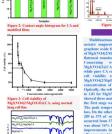
Cellulose Acetate-Based Films Embedded with Magnesium Ortho-Vanadate, Magnesium Oxide, and Graphene Oxide for Wound Healing Student Name: Alnoor Y.A. Al Bosager Supervisors: Dr. Hany Abd M. El-Lateef, Dr. M. Gouda

Chemistry Department, College of Science, King Faisal University
Paper Materials (2023), IF= 3.748, Q1
Green chemistry and sustainable development track
Results and Discussions









Mul

برنامج علماء المستقبل 2023



Out-patient clinic screening for anemia with non-invasive spectrophotometric hemoglobin concentrations compared to laboratory hemoglobin among sickle cell disease patients. A prospective observational study, المعتقد المعت









Table 1 and 2 Demographics and laboratory data. Mean of Hb F was not different with Hydroxy Urea or not.





MCC = 1.700 | m = 0 at 10 to 100 | m = 0 at 10 to 100 | m = 0 at 10 to 100 | m = 0 at 100 | m =



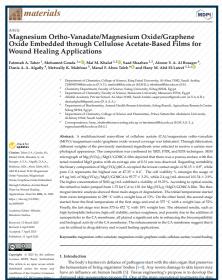
The low PI values effect on SpHb readings in this specific group of SCD patients need further indepth



# ثانياً: الأوراق العلمية

الاوراق المنشورة	عدد الاوراق	المسار	P
	1	الذكاء الاصطناعي في الطب (الجراحة)	1
	2	طب التخدير	2
	1	الهندسة والتصنيع والبناء	3
1	2	الكيمياء	4
	2	الفيزياء	5
	1	التقنية الحيوية	6
	2	الطاقة المتجددة	7
1	11	اجمالي الأوراق العلمية	



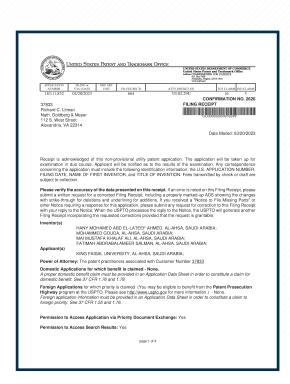






# ثالثاً: براءات الإختراع

رقم التسجيل	عدد براءات الإختراع	المسار	P
	1	الذكاء الاصطناعي في الطب (الجراحة)	1
	0	طب التخدير	2
	0	الهندسة والتصنيع والبناء	3
مجال معالجة الماء- رقم الطلب 18/139.461. مجال خلايا الوقود - رقم الطلب 33102.29	2	الكيمياء	4
	0	الفيزياء	5
	1	التقنية الحيوية	6
	0	الطاقة المتجددة	7
	4	اجمالي البراءات	



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Application Nu	mber	18/139,461		
Filing Date		2023-04-26		
First Named In	ventor	MOHAMED GOUDA		
Title		DATE PALM FROND MODIFIED HYDROGEL-ENCASED WITH MI WASTEWATER TREATMENT		
Art Unit				
Examiner Nam	10			
Attorney Docks	et Number	33102.31U		
SIGNA	TURE of A	pplicant or Patent Practitioner		
Signature	/Josl	nua B. Goldberg/	Date (Optional)	
Name	Joshua	B. Goldberg	Registration Number	44126
Title (if Applicant is juristic entity)	5.8			
Applicant Name (i	f Applicant is a	juristic entity)		
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the public which is t 1.11 and 1.14. This application form to t to complete this form	o file (and by to collection is es the USPTO. To in and/or sugge J.S. Departmen	uired by 37 CFR 1.131, 1.32, and 1.33. The Infine USPTO to process) an application. Confidentimated to take 3 minutes to complete, including ne will vary depending upon the individual case slions for reducing this burden, should be sent to G Commerce, P.O. Box 1450, Alexandria, VADDRESS, SEND TO: Commissioner for Pate	tiality is governed by 35 L g gathering, preparing, an Any comments on the ar to the Chief Information C 22313-1450, DO NOT S	J.S.C. 122 and 37 CFR d submitting the completed nount of time you require fficer, U.S. Patent and END FEES OR



# رابعاً: المنتجات القابلة للتتجير

عدد المنتجات	المسار	P
1	الذكاء الاصطناعي في الطب (الجراحة)	1
1	طب التخدير	2
2	الهندسة والتصنيع والبناء	3
1	الكيمياء	4
0	الفيزياء	5
1	التقنية الحيوية	6
2	الطاقة المتجددة	7
8	اجمالي المنتجات	











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87 منشورًا



حجم التفاعل والظهور الكلي لحساب تويتر الجامعة

**5,1** مليون





# 🖴 النشر الإعلامي لحسابات الجامعة الرسمية

### تويت











### الانستغرام







# ك النشر الإعلامي لحساب البرنامج

### تويتر







# البنرات في موقع الجامعة الرسمي



# أبرز تغريدات الصحف









# المسار الرابع



# أبرز تغريدات الجهات







### أبرز تغريدات المغردين

























































