



**EURASIA RESEARCH LIVE
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PROCEEDINGS**

2021- International Conference on Research in
Life-Sciences & Healthcare (ICRLSH)

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Table of Content:

S. No.	Particulars	Page Numbers
1.	Preface	3
2.	Keynote Speaker	4-7
3.	List of Presenters	8-25
4.	List of Listeners	26-27
5.	Upcoming Conferences	27



Preface:

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You will be able to freely communicate your queries with us, collaborate and interact with our previous participants, share and browse the conference pictures on the above link.

Our mission is to make continuous efforts in transforming the lives of people around the world through education, application of research & innovative ideas

LIST OF KEYNOTE SPEAKERS



Iolanda Costa Galinha
Associate Professor, Universidade Autónoma de Lisboa,
Psychology Department, CIP - Centro de Investigação em
Psicologia, UAL, Portugal

Topic: Sing4Health - Singing Groups as Effective Interventions to Increase the Well-Being, Cognitive Function and Health of Older Adults



Dr. Anuli Njoku
DrPH, MPH, Associate Professor, Southern Connecticut State
University, USA

Topic: Nutrition and Your Health



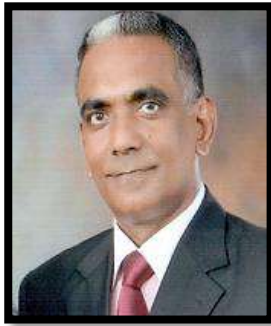
Dr. Siddrah Irfan
National University of Science and Technology (NUST),
Islamabad, Pakistan

Topic: Mental Health and research: Risk and Protective Factors



Asso. Prof. Nasser Drareni
Associate Professor, English Specific Purposes, University of
Lounici Ali Blida2, Algeria

Topic: Using Concept Mapping as an Effective Strategy to Promote Meaningful Learning of Medical Terminology in Coronavirus Disease: case university of medicine Algiers



Major K. M. Udaya Banda Konarasinghe (Retired)
Managing Director/Research Consultant/Scientist, Institute of
Mathematics and Management, Sri Lanka

Topic: Role of Scientific Forecasting on COVID-19 Pandemic



Seetha Sagarán
Personal Development Trainer, Lifestyle Consultant,
Motivational Speaker, Mentor, Dubai, UAE

Topic: Loyalty - Creating Personal and Professional Progress
Through Commitment



Marie Grace Gomez
Associate Professor, College Education, University of the
Philippines, Diliman, Philippines

Topic: Health literacy programs for persons with disabilities



Dr. Rozana Huq
Organizational Behaviorist | Specialist Leadership Educator and
Coach | Principal RHM Training UK



Dr. Agnieszka Ilendo-Milewska
Director, Faculty of Psychology, Private University, Bialystok,
Poland

Topic: Neuroscientific Evidence Regarding Self-Regulation and
Its Failures



Dr. M. A. Motalib Hossain
**Post-doctoral Research Fellow, Nanotechnology and Catalysis
Research Centre (NANOCAT), University of Malaya, Kuala
Lumpur, Malaysia**

**Topic: Advancement of Molecular Based Techniques in the
Authentication of Food Products**



Dr. Francis Sigmund Topor
**Doctor of Philosophy in Education, Specialization in Post-
Secondary and Adult Education, Capella University,
Minneapolis, Minnesota, United States of America**

**Topic: International Standard in Research Epistemology for the
Medical Sciences**



Ana Sofia Saldanha
**Translator (English and Spanish into Portuguese), Lecturer,
Mentor (Member of the EMCC and Associate Board Member
IMA), Lisbon, Portugal**

Topic: Is Mentoring (Really) Science?



Dr. David Harris-Birtill
**PhD, MPhys (Hons), Lecturer, School of Computer Science, The
University of St. Andrews, Scotland, United Kingdom**

**Topic: Deep Learning for Cancer Detection from Mammography
to Microscopy**



Dr. Merissa Braza Ocampo
Ph.D., Fukushima Gakuin University, Fukushima City, Japan

**Topic: Self-Care Management of Japanese Students During
Covid-19 To Enhance Subjective Wellbeing**



Dr. Jennifer Paule Reyes, Rn
**Associate Professor II, Full Time Faculty – College of Nursing,
Pamantasan ng Lungsod ng Maynila (University of the City of
Manila) Manila, Philippines**

**Topic: Usability and Perceived Effectiveness of Coping Strategies
of Significant Other - Caregiver of Patients Both Infected and
Affected with HIV and AIDS**



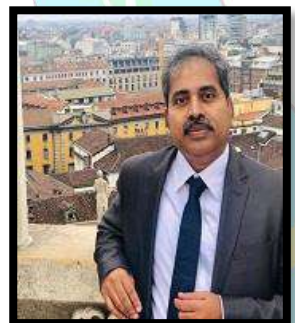
Svetlana S. Muradyan
**Associate Professor, PhD in Education Sciences, Lecturer of
Chair of Special Pedagogy and Psychology of ASPU, Armenia**

Topic: Advantages and disadvantages of inclusive Education



Dr. Priscilla Das
**Faculty of Medicine, SEGi University, No. 9, Jalan Teknologi,
Taman Sains Selangor, Kota Damansara, Petaling Jaya,
Selangor, Malaysia**

**Topic: Endothelial Progenitor Cells and von Willebrand Factor
in Astrocytic Glioma**



Dr. MDP RAJU

**Professor and Head of the Department, Department of Surgery,
SSRAMC Ayurvedic Medical College, Inchal, Karnataka, India**

Topic: 10 Simple Steps to Avoid Hemorrhoidal Disease

PRESENTERS



Diana Maltseva
ERCICRLSH2029060

Hypoxia-induced changes of miRNA and mRNA expression in HT-29 cells

Diana Maltseva

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Hypoxia contributes to various pathophysiological processes including cancer progression and metastasis development. The molecular mechanism of response to hypoxia may include recruiting specific miRNAs to regulate expressions of their target genes. Some miRNAs were found to be altered by hypoxia in many cells, however differential expression of miRNAs and their target some generally depends on hypoxia induction mechanism and cell type. In this work, we studied the effect of hypoxia on transcriptome and miRNome of human colorectal adenocarcinoma cell line HT-29. Treatment of HT-29 cells with cobalt (II) chloride for 24 hours was used to model the hypoxic microenvironment. The integrated sequencing of miRNAs and mRNAs allowed us to identify differentially expressed them. The enrichment analysis of miRNA target genes was carried out to identify key players involved in response to hypoxia. Sixteen human miRNAs were found to be differentially expressed, six of them (hsa-miR-18a-5p, hsa-miR-22-3p, hsa-miR-27a-5p, hsa-miR-182-5p, hsa-miR-215-5p, hsa-miR-425-5p) had a statistically significant fraction of target genes with opposite change direction. We also constructed a hypoxia-induced regulatory network based on interactions of aberrantly expressed transcription factors and miRNAs. Analysis of the network revealed HIF-1, p65, c-Myc, and EGR1 as hub transcription factors regulating the majority of differentially expressed miRNAs.

Manuela P. Tarazona
ERCICRLSH2029074

Nurse's Safety Attitudes as Perceived by Geriatric Patients in Homecare Institutions

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Abstract

COVID-19 pandemic has brought bizarre challenges and an incommensurate threat to humanity, especially to geriatric patients' lives, relationships, and well-being (Adhikari et al., 2020). With the spread of the new coronavirus and its impacts on human health, no one knows how long this pandemic will last and its long-term toll on geriatric patients living in a confined environment such as homecare institutions. The purpose of this study is to determine the nurse's safety attitudes in times of pandemic as perceived by the geriatric patient's in-homecare institutions. Data were gathered using an adapted and modified questionnaire entitled, "Nursing Home Survey on Patient Safety" from the research study of Alvin C. Ogalesco and Janet B. Lim of the University of Texas, for whom the authors were asked permission for its use. The research results showed: that most of the geriatric patients were 60 to 69 years old, female, married, and stayed for 0 to 9 years in the homecare institution; a very much evident nurse's safety attitudes was noted as perceived by the geriatric patients in terms of cognitive,

affective and psychomotor aspects; and that there were significant differences between the nurse's safety attitudes when the respondents were grouped according to their gender, civil status and length of stay in the institution.
It was recommended that: geriatric patients should view old age as an opportunity for continuous development, satisfaction, and well-being; and that nurses must always carry with them their best safety attitudes while taking care of them, keeping in mind all these characteristics especially on critical times like the pandemic; nurses to become more sensitive to the needs of the geriatric patients, focusing on counseling them to become aware of the necessary steps to avoid infection during the pandemic; accept their limitations and mental health management; family and relatives of geriatric patients to think that aging is a natural experience and must confidently learn how to care and cope with their geriatric patients especially during a pandemic; nursing education to emphasize on the teaching of student nurses on how to manage giving care to geriatric patients inside homecare institutions to promote good and effective health interventions during the pandemic.

Keywords:Safety Attitudes, Nurse's Safety Attitudes, Geriatric Patients in Homecare Institutions

Stepan Nersisyan
ERCICRLSH2029065

A Pipeline for Feature Selection and Classifier Construction and its Application to the Problem of Breast Cancer Recurrence Prediction

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Abstract

Overfitting is one of the major challenges of classifier construction in biomedical applications. To prevent overfitting, we developed a novel classifier construction pipeline and applied it to the breast cancer recurrence prediction problem. The pipeline consists of the following steps:

- 1)interactome-based unsupervised gene pre-selection using an original algorithm;
- 2)supervised feature selection;
- 3)exhaustive analysis of fixed-length feature combinations using a linear support vector machine model.

We have systematically studied this pipeline using publicly available microarray and RNA-sequencing data:

- 1)the first step was turned on and off;
- 2)several methods including L1 regularized selection, most differentially expressed gene selection, and random selection were used at the second stage;
- 3)combination length was varied.

The results showed that the best classification reliability and overfitting resistance were achieved by using feature selection based on the rate of differential expression with feature pre-selection turned on. In this case, 89% of constructed 8-gene combinations passed prediction quality filtration thresholds on an independent testing set (average ROC AUC for the constructed combinations was 0.78, sensitivity — 0.69, specificity — 0.72). In contrast, L1 regularized feature selection led to highly overfitted models. Namely, only 10% of constructed 8-gene combinations passed the filtration, and the average ROC AUC for the constructed combinations was 0.66. Additionally, it is worth noting that along with a decrease of overfitting and increase of prediction quality, the pre-selection step also provides portability of results on other gene expression profiling platforms.

Keywords: Classification, Feature Selection, Overfitting, Breast Cancer, Prognostic Signatures.

Agnieszka Pluta
ERCICRLSH2101053

Self-Assessment of Health Status and Disease Acceptance in Patients with Type 1 and Type 2 Diabetes

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Abstract

Diabetes is a chronic disease that brings about changes in the patient's life, forcing them to conform and develop a new model of functioning. Acceptance of illness has a positive effect not only on the patient's physical condition, delaying the occurrence of complications but also on their mental condition, contributing to self-acceptance. The study aimed to analyze the self-assessment of health status and disease acceptance in patients with diabetes. Material and method. The study involved a group of 190 adults, including 52 subjects with type 1 diabetes and 138 subjects with type 2 diabetes treated on an outpatient basis. To collect the data, an anonymous questionnaire of own design and the Acceptance of Illness questionnaire (AIS authors: Felton et al., Polish adaptation by Z. Juczyński) were used. Results. The study group included 89 men and 101 women. The mean age was 42.2 ± 13.4 years. Most of the respondents (75.2%) assessed their health as good and very good. The most numerous group of patients were people with a high level of disease acceptance - 101 people (53.2%) (over 19 points / 40 points). Variables such as sex, age, or education did not determine the level of self-acceptance of health among the respondents. Along with the duration of the disease, the level of disease acceptance decreased ($p = 0.020$). A negative statistically significant correlation was demonstrated between the self-assessment of health conditions and the level of acceptance of the disease ($p = 0.003$). Conclusions. The vast majority of diabetic patients assessed their health as good and very good. A high level of disease acceptance was found in the study group. The level of disease acceptance, which was found to decrease with the duration of the disease, indicates the need to include substantive support in the individualized treatment process through therapeutic education and psychological support.

Alaauldeen AL-Sallami
ERCICRLSH2101064

Effect of Antiphospholipid (IgG-IgM) and its relationship with the level of white blood cells in women undergoing intracytoplasmic sperm injection (ICSI)

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Abstract

This study was conducted on 84 samples of women subject to the ICSI program which belong to 84 women who suffer from non-pregnancy for patients attending the fertility center in Al-Sadr Medical Hospital in the governorates of Najaf, for the period between January 2019 and March 2020. In this study, the sample was divided into two sections An intravenous blood section to measure WBC and a serum section to measure antiphospholipid (IgG-IgM) while β -hCG was used to indicate the success of ICSI, the presence of pregnancy from its absence, as these groups were divided The interior is in threshing, based on the β -hCG level to Two groups (Pregnant Women Group - Pregnancy Failure Group) and then divided the total of pregnant women into (Pregnancy Group and spontaneous miscarriage) and then demonstrate the immunological effect on the pregnancy of women after ICSI technique.

The results of the current research showed a significant increase at the level of significance ($p < 0.05$) in the level of the hormone β -hCG and that the increase in the level of this hormone is evidence of the presence of high success rates for pregnancy in women who performed operations IVF, where the success rate at the beginning of the matter reached 61.9%, after which it decreased to 33.3% after the first three months due to the occurrence of a spontaneous miscarriage of pregnant women due to various immunological and physiological reasons, as well as a positive correlation between the level of β -hCG and other parameters within the study (Antiphospholipid (IgG-IgM) -WBC).

The results of the current research also showed a significant difference at the level of

significance ($p < 0.05$) between the group (pregnancy failure) and the group (spontaneous miscarriage) compared with the control group (continued pregnancy) concerning the level of Antiphospholipid (IgG-IgM), Also, The results of the current research showed a significant difference at the level of significance ($p < 0.05$) between the group (pregnancy failure) and the group (spontaneous miscarriage) compared with the control group (continuation of pregnancy) concerning the level of WBC, and the present study found a positive relationship between the level of Antiphospholipid (IgG-IgM) and WBC.
Keywords: Miscarriage, ICSI Technique, Antiphospholipid (IgG-IgM), White Blood Cells

Mohamed Rajab
ERCICRLSH2103094

Public Survey of Financial Incentives for Kidney Donation In Bahrain

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Dr. Adel AlAlwan
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Dr. Amjad Al-Baz
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Abstract

Background: With the increasing prevalence of end-stage kidney disease in Bahrain, kidney donation is of vital importance. In this study, we want to assess how financial incentives will influence peoples' views and decisions regarding kidney donation. The aim is to establish strategies to increase the number of kidneys for transplantation in Bahrain. **Method:** We adapted a previously established questionnaire on financial incentives for living kidney donations. The questionnaire assessed the public opinion in Bahrain on how kidney donation can be influenced by two different financial incentives, namely 10,000 BHD and life-long health insurance. We collected a convenient sample of 446 participants by distributing an electronic version of the questionnaire. SPSS-23 software was used for data entry and analysis. **Results:** Of the total participants 39% were male and 61% were female. Eighty- percent of the participants believed that their chances for kidney donation will not increase in turn of receiving financial compensation, while 20% of them believed that it will increase. Our study found that generally married participants (70%) find it a preferable development for health insurance companies to offer financial compensation for kidney donation, while non-married participants (30%) found it not a preferable but also not an adverse development (P-value 0.038). Furthermore, there is a positive correlation between age and preferable views toward financial incentives to increase kidney donation (P-value < 0.001). **Discussion:** Although financial incentives for kidney donation might encourage a minority of the population, the majority will not be influenced by implementing a financial incentives system for kidney donation.

Jingjing Sun
ERCICRLSH2103097

Influence of recuperation environment in medical institutions on chronic pain in elderly patients and analysis of protective measures

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Abstract

Chronic pain is a common disease of elderly patients, and it is also a factor that has a significant impact on the physical and mental health and quality of life of elderly patients. In terms of the existing research, most of the relevant fields focus on the diagnosis and treatment of chronic pain, and various alternative therapies have also been studied and discussed on a certain scale. This paper is more from the overall rehabilitation work of medical institutions, for patients with chronic pain, this paper analyzes the factors which influence, not only consider a patient's nursing intervention, also considering the patient's medical workplace environment, etc., for a variety of factors affect the elderly patients with chronic pain conditions and corresponding protection measures are analyzed. In this study, data from 274 chronic pain patients in inpatient geriatric wards of medical institutions were collected on August 20, 2019, and October

4, 2019. The questionnaire with homemade medical organizations recuperate environment evaluation questionnaire and chronic pain evaluation questionnaire, data analysis results showed that patients with common for evaluation of landscape maintenance and higher for the evaluation of equipment and facilities, in patients with chronic pain in addition to showing the pain feeling, also show the anxiety and fear, insomnia, and the use of antipsychotic medications, to go out for a walk, and other common activities. The condition of equipment and facilities, especially the experience of hospital bed use ($P < 0.01$), significantly affected the pain perception of patients; The special features of landscape maintenance were the sports sites ($P < 0.01$), which significantly affected the pain perception of patients; Artificial service, especially service attitude ($P < 0.01$) significantly affected patients' pain perception. For the overall feeling of chronic pain, the structural equation model analysis results show that the artificial service for patients with chronic pain condition has a significant effect ($p < 0.01$), and facilities for patients with chronic pain conditions affect significantly weaker ($p < 0.1$), landscape maintenance for patients with chronic pain conditions influence was not significant. The effect of each subdivision index on the artificial service was generally significant and strong, and the highest coefficient was service attitude ($P < 0.01$), indicating that the service attitude had a significant impact on patients' chronic pain. Based on this, it can be seen that nursing intervention activities in the convalescent environment of medical institutions, especially the service attitude of the staff, have a significant impact on patients' chronic pain. Therefore, to reduce chronic pain in patients with symptoms and effects, improve patient quality of life, the medical establishment environment needs through ascension and improve nursing intervention level, improve the quality of service methods such as the certain protective measures for patients with chronic pain, and more with the introduction of interpersonal communication activities and sports exercise program and so on ways to improve the patient's social environment, to reduce the patients suffering from chronic pain, improve the patient's symptoms.

Keywords: Recuperation Environment, Recuperation Personnel, Elderly Patients, Chronic Pain

The Effect Of Covid-19 On The Well-Being Of Emergency Medicine Physicians

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Abstract

BACKGROUND: Even under normal circumstances, Emergency medicine can present challenges with emotional and physical well-being. Coronavirus is now an additional pressure posing a threat to psychological health. A qualitative study was conducted to assess the impact of COVID-19 on the well-being of ED Doctors. **METHODS:** A cross-sectional e-survey was circulated from 1st January to 20th February 2021 among the Junior and Middle-grade Doctors working in an Emergency Department within the West Midlands. The survey consisted of ten questions that focused on assessing different aspects of daily life, their mood, and how they perceived the stress caused by it. **RESULTS:** Thirty doctors responded to the survey of which 16 (53.4%) lived by themselves, and 14 (46.6%) lived with their families. Eleven were directly affected by COVID-19, either because they tested positive or had a family member suffer from the virus. Twenty-one doctor experienced negative emotions several times a month, due to things spinning out of their control. Around 20 Doctors (66.6%) reported being under moderate to extreme levels of stress, working during the COVID Pandemic, and felt they were putting things off for later, due to difficulties in balancing work and personal lives. A fifth of the doctors noticed that they were lacking in confidence regarding handling matters in personal and work lives. Four doctors felt that the pandemic affected their career progression due to redeployment, canceled courses, and self-isolation. A significant percentage believed that their working patterns, respective family situations, and/or unwell relatives had the greatest impact on their well-being during the Pandemic. **INTERPRETATION:** We observed a decline in psychological well-being. Our survey enabled doctors to express their difficulties during the pandemic and highlighted the need for focused mindful measures that can provide them with

**Dr. Lakshmi Nivedha
Lakshmi Raja
&
Dr. Savithry Satishbabu
ERCICRLSH2103098**

solutions and support where required². By promoting such techniques in workplace environments, the stigma surrounding Mental Health issues can also be reduced.

Leadership Initiative to Enrich the HIV/AIDS Education for Senior High Schools of Laguna Local Colleges and Universities

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Dr. Ma. Cecilia Martinez

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Abstract

This study was conducted to determine the degree of leadership initiative to enrich the HIV/AIDS education of the 376 senior high schools of Laguna Local Colleges and Universities. Results showed that there are: high levels of knowledge on HIV/AIDS in terms of transmission, prevention, and protection; and high levels of awareness about the effects of HIV / AIDS in terms of the physical, psychological, socio-economic, and spiritual aspects of senior high school students-respondents of Laguna Local Colleges and Universities; there is a very low Current State of HIV/AIDS Education in Laguna Local Colleges and Universities vis-à-vis Senior High School curriculum; there is a high status of opportunity, low status of strengths, high status of weakness, and high status on challenges for the current senior high school curriculum for the Laguna Local Colleges and Universities vis-à-vis HIV/AIDS education. It was recommended: that senior high school students must become more knowledgeable and aware about HIV/AIDS; more conscious on what level do their students understand/know about HIV /AIDS; as these are key steps in making decisions about their health; and be transformed in terms of their attributes in becoming leaders (knowledgeable, aware and informed) advocating about HIV/AIDS (prevention and protection) for every young person in every community; that parents of senior high school students to become more open and willing to tackle questions about HIV / AIDS education and discuss it with their children; that school administration to raise the knowledge and awareness specifically on HIV/AIDS of their senior high school students; and for the educators and peer counselors to acknowledge the additional facts from previous researches that may be verified in this study so it will be beneficial to the practitioner in their functions as health care providers, educators, and counselors.



Dr. Marc Lester Quintana
ERCICRLSH2036053



Dr. Ma. Cecilia Martinez
ERCICRLSH2036053



Hanmil Jang
ERCICRLSH2108054

Detection of Circulating Tumor DNA from Esophageal Squamous Cell Carcinoma and NGS Analysis of Genetic Variants

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Abstract

Background Esophageal cancer is cancer without an effective diagnostic method other than endoscopy, and nodal metastases are often gone undetected in radiological testing. Circulating tumor DNA(ctDNA) is a prospective biomarker for both diagnosing and monitoring esophageal cancer, currently being tested for its clinical application.

Method We obtained blood samples from 49 patients who underwent surgical treatment for esophageal squamous cell cancer(ESCC) and performed NGS analysis of plasma cell-free DNA(cfDNA) via a customized gene panel of 27 genes known to be correlated with ESCC. We evaluated each somatic variant on its clinical significance and its correlation with clinical variables of patients. Sequential tests were performed for each patient during follow-up visits.

Result Tier 1/2 variants were detected from 20 initial samples out of 49 patients. Among 27 genes, TP53 showed the highest detection rate (20%), a finding consistent with other research. Most variants were single nucleotide polymorphism(SNP), with small insertion or deletion consisting of only a small proportion of variants. Of all SNPs, the most common base change was C>T (60%) Cochran-Armitage trend test revealed a significant difference in detection rate between stages of disease ($p = 0.016$) and nodal invasion levels ($p = 0.008$). Follow-up tests demonstrated increasing patterns of variant allele frequency(VAF) of tier 1/2 variants, among 3 out of 6 patients with disease recurrence. A rare case has been also discovered carrying a germline oncogenic variant (CDKN2A R87W).

Conclusion The NGS analysis of ctDNA can contribute to the diagnosis and monitoring of ESCC, with ensuring efficiency of testing by utilizing customized gene panels.

Keywords: Esophageal Squamous Cell Cancer, Next-Generation Sequencing, Circulating Tumor DNA

Marina Izmailovich
ERCICRLSH2107054

Association Between Serum 25-Hydroxyvitamin D Concentration And Severity Of Seasonal Allergic Rhinitis In Kazakhstan

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Abstract

Background. Vitamin D deficiency (VDD) remains one of the major public health issues affecting at least one billion people worldwide. Atmospheric pollution might further deteriorate VDD and the Karaganda region of Kazakhstan is characterized by high levels of pollutants in the atmospheric air, exceeding the maximum permissible concentrations. Patients with allergic disorders and, in particular, respiratory allergies are susceptible to VDD. **Objective.** The study was aimed to assess the levels of serum 25-hydroxyvitamin D (25(OH)D) and their associations with the severity of seasonal allergic rhinitis in the Karaganda region, Republic of Kazakhstan. **Materials and methods.** This cross-sectional study included 416 patients with seasonal allergic rhinitis aged 18-65 years (mean age 39 ± 8 years), 267 of whom were females. The serum concentration of 25(OH)D was measured with Beckman Coulter DxI automatic modular analyzer (USA) between June 1, 2019, and September 31, 2019. VDD was defined as serum concentrations of 25(OH)D below 20 ng/ml. **Results.** The median concentration of 25(OH)D in blood serum was below the reference threshold (20 ng/ml) and amounted to 16.1 ng/ml. Seventy-five percent of patients with seasonal allergic rhinitis had VDD and this was common in all age categories: 75.6 % of 18-39 years old, 78.4 % of 40-59 years old, and 64.6 % of >60 years old. In addition, VDD was more prevalent in female patients with seasonal allergic rhinitis (82.8 %) as compared with the male patients (61.1 %) ($p < 0.01$). Of interest is the fact that low serum 25(OH)D concentration correlated with the severity of symptoms: nasal congestion and nasal discharge ($r = -0.94$), sneezing, itchy nose and eyes, tearing ($r = -0.67$). **Conclusion.** Nowadays, VDD remains an unresolved problem in Kazakhstani patients with seasonal allergic rhinitis. Vitamin D is a prohormone with immunomodulating properties. According to our study, a significant part of patients with allergic rhinitis residing in the Karaganda region of Kazakhstan

had deficient status of 25(OH)D and this correlated with the severity of symptoms. The outcomes of our study could be of interest to both clinical physicians and public health professionals, who could envisage preventive strategies to tackle this problem.
Keywords: Adults, Vitamin D Deficiency, Karaganda Region, Republic of Kazakhstan



Alisa
Kanokchoteworakarn
ERCICRLSH2107055

Commercial Feasibility Study Of Selling Microencapsulation Probiotic Product To Food Supplement ODM Manufacturing In Thailand

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Abstract

There is a wide range of food supplement brands in the market. As a result, these manufacturers can potentially serve as a channel for pioneering the microencapsulation-technique research in which it can protect probiotics while delivering them to the human's colon. The study is conducted qualitatively with the semi-structured interview method. There are a total of seven companies that are leading manufacturers and brand owners of probiotics products in Thailand. The result shows that Thailand is not ready to produce probiotics for the food industry yet because probiotics manufacturing requires high investment and registration with the Thai government which has many requirements and lengthy processes. As a result, there is no commercial probiotics manufacturing in Thailand and this kind of raw material must be imported. Therefore, the target customers of the technology ought to be outside of Thailand.

Keywords: Supplement, Probiotic, Synbiotic, Microencapsulation, Raw Material

Chun-Lin Wang
ERCICRLSH2110051

A Non-Invasion Method on Coronary Artery Disease Based on Hilbert Huang Transform

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Chiu-Chi Wei
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Abstract

Cardiovascular diseases accounted for a large proportion of global deaths in the past decade. The main reason is that they usually happen too quickly to be dealt with in time. Even if there is time to deal with them, they often miss opportunities because they are alone or don't know how to correctly deal with them. When the patient feels that the heart has symptoms of discomfort and goes to the hospital for diagnosis, it is often because the discomfort symptoms have disappeared, causing the doctor to be unable to determine the problem correctly. Treadmill exercise test (Treadmill exercise test) has proved that professionals can obtain a lot of potential risk information from the ECG table. However, the overall process of the treadmill exercise ECG test is very time-consuming, except for going to the hospital to participate in the facility operation, Assisting nursing staff in obtaining information, and ultimately must be diagnosed by a specialist in person and make comments and suggestions. This kind of procedure is not suitable for general routine or routine examination. Therefore, with the Holter monitor, the 24-hour accurate continuous recording of the ECG generated by the patient's heartbeat will help the physician to obtain more detailed and complete information as the best basis for diagnosing cardiac function. In the study of this plan, we try to relax three factors because these factors not only take time but also may harm the health of patients: (1) treadmill test (2) doctor's interpretation of ECG (3) patients' preliminary judgment results in Mastery. We recommend using the Treadmill exercise test with a Holter monitor to collect the ECG signal and then disassemble the ECG signal through Hilbert-Huang conversion (HHT). HHT has a unique nonlinear time-frequency analysis to characterize the ECG mode. In terms of accuracy and time, we can go beyond conventional methods to quickly determine the risk level.

Keywords: Electrocardiography, Treadmill Exercise Test, Holter Monitor, HHT

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ERCICRLSH2110052

Research on the Current Situation of Social Resource Management and Technological Development of Taiwan Indigenous People -Taking Hsinchu County as an Example

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Abstract

Taiwan's indigenous peoples refer to dozens of ethnic groups with different languages and lifestyles settled here before Han's immigrants in the 17th century. According to Taiwan's "Indigenous Peoples Status Law," the population statistics are about 570,000. They were accounting for 2.44% of Taiwan's total population. The aboriginal peoples in Taiwan are divided into mountain aboriginals and flat aboriginals. There are a total of 16 officially recognized aboriginal peoples. In February 2019, it was announced by the Indigenous Peoples Committee, the official agency, that the aboriginal population of Hsinchu County accounted for 3.82% of the total population of Hsinchu County, mountain aborigines accounted for 7.56% of Taiwan's aboriginal population, the plain aborigines accounted for 0.38%. At the economic and social level, indigenous peoples often live in disadvantaged situations, and how to effectively use social resources and improve their economic and social capabilities is essential. This research explores health, education, employment, emergency relief, and other indigenous peoples' welfare measures. It uses the current situation of the aboriginal social resources in Hsinchu County to enhance further the living environment of the indigenous peoples in Taiwan.

Keywords: Taiwanese Aborigines, Han's Immigrants, Social Resource Management

Cheng-En Wu
ERCICRLSH2110053

Regular Exercise Awareness and Behaviour in Male College Students

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Abstract

This study aimed to help Male college students develop regular exercise habits through behavior modification. This quasi-experimental study involved a questionnaire survey with 50 Male college students who did not exercise regularly and a 10-week exercise program. The participants were sampled and randomly assigned to the experimental and control groups; only those in the experimental group participated in a the10-week exercise program. A self-designed scale entitled 'Scale of Regular Exercise Awareness and Behaviour in College Students' was used as the pretest and posttest to compare differences between the experimental and control groups. The results revealed that after completing the 10-week exercise program, the experimental group had a significantly higher mean functional awareness, planning awareness, and functional behavior than did the control group. This indicates that the experimental group recognized the importance of regular exercise and engaged in more exercise behavior. The experimental group's planning behavior towards regular exercise decreased (pretest mean: 26.30; posttest mean: 21.64), which implies that the experimental group had formed regular exercise habits. In addition, this study discovered a medium-to-high correlation between Male college students' exercise frequency (10-week exercise program) and their regular exercise awareness and behavior. This study applied behavior modification and a 10-week exercise program as the strategy to encourage independent regular exercise among Male college students. The current findings may help Male college students develop regular exercise habits.

Keywords:Behaviour Modification, Functional and Planning Awareness, Functional and Planning Behaviour, Regular Exercise

ShihWen-Lung
ERCICRLSH2110054

Research on the Use of AI Systems in National-Level Crisis Events Based on the Theory of Scientific and Technological Acceptance Model

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Abstract

Taiwan is listing as a developed country, and its economic development is world-renowned. To enhance Taiwan's overall competitiveness, various major public projects and administrative reforms are implementing rapidly. With the rapid growth of urbanization and Taiwan's unique geographical environment, natural and man-made disasters occur frequently. The use of AI (Artificial Intelligence) technology in major modern national-level crises has unlimited potential, and countries are vying for development. In this AI competition, seize this excellent opportunity to raise AI development to the level of national strategy and further use. Therefore, it will have an uneasy impact and impact on national security and social stability. From the perspective of crisis management, how to ensure the safety of people's lives and property, improve the ability to prevent crises, and stop the occurrence of situations is the primary task of the security systems of all countries in the world, and an important goal pursued by governments of all nations. The essence of crisis management is an active investment, not a passive response to "institutionalization" and "institutionalization." Which is the core of the overall crisis management mechanism. This article combines AI with crisis management and national-level processing mechanisms and can coordinate relevant departments to assess safety and security. Crisis contingency plans can play their due crisis handling functions when a crisis event breaks out.

Keywords: Natural Hazard, Artificial Hazard, Institutionalization, AI (Artificial Intelligence)

The Impact of Agricultural E-commerce on Taiwanese Young Farmers Who Return to Their Hometowns to Promote Self Homegrown Products

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Abstract

This study explores why young farmers return to their agricultural hometowns and how they participate in the increasingly important e-commerce sector. In particular, since the e-commerce platforms for fresh produce have been significantly emerged in recent years in Taiwan, I will, firstly, investigate the collaboration relationship between the Taiwanese young farmers and the agricultural e-commerce platforms, secondly, discover the incentive factors for the young farmers who would like to use the Internet to promote and sell their homegrown fresh produce, and finally, offers the e-commerce platforms practical suggestions that can enhance the competitive business models for marketing agricultural products and maintain the dynamic chain between supply and demand of agricultural products. This research reviews the relative literature that remaps the agricultural e-commerce market and uses in-depth qualitative interviews. The research subjects are the young farmers who return to their agricultural hometowns and use the Internet to sell their homegrown products. 28 young farmers are interviewed. Meanwhile, I also interview 8 official representatives and officers from the national agencies including the Council of Agriculture, the Agriculture and Food Agency, the Tea Research and Extensions Station, and the city government agency such as the Agriculture Bureaus. This research finds that the way the young farmers choose the e-commerce platform is mainly based on the platform's administrative fee, the delivery conditions,



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the payment mechanism, and the distribution modes. In addition, the logistics cost, the convenience of distribution, and the storage of products are also in consideration. The operation and management of the platform, including brand image, reputation evaluation, membership attributes, advertising quality, and the effectiveness of operating the platform are also accessed by the young farmers.

Keywords: Young Farmers, Agriculture Marketing, Agricultural E-Commerce, Internet Marketing



Brisida Shera
ERCICRLSH2115056

Study of the Association between Diabetes Mellitus, Anemia and Renal Insufficiency for a Group of Individuals in the Shijak Population

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Abstract

The aim of the study was to evaluate the association between Diabetes Mellitus, Anemia and Renal Insufficiency, as the main diagnosis and as a concomitant disease in a population of 302 individuals (161 female and 141 male) for the year 2020 (January – December) and for the year 2021 (January - July), where 82 % of individuals are patients with diabetes mellitus, 15 % are with anemia and 3 % are patients with Renal Insufficiency. Diseases have been studied separately from each other to assess the correlation between them, based on the values of the main analytical components. Diabetes is a group of metabolic diseases characterized by hyperglycemia resulting from defects in insulin secretion, insulin action, or both. Anemia is a deficiency of red blood cells (erythrocytes) and hemoglobin. Renal Insufficiency is the case when the kidneys do not work properly. From this study was determined that in the VII age group individuals with Diabetes Mellitus have higher average value of azotemia and creatinemia, increasing the risk for Renal Insufficiency. In the VII age group, individuals with Anemia have higher average value of Glycemic, increasing risk for Diabetes Mellitus. In the VII age group, individuals with Renal Insufficiency have lower average value of erythrocytes, increasing the risk of developing Anemia. Knowledge gained from this study are important for the prevention of concomitant diseases, not allowing the deterioration of the health condition. Implementing a lifestyle with the right rules as good living environment conditions, working environment conditions, balanced food diet, regular physical activity, continuously controlled medication during treatment of the disease.

Keywords: Diabetes Mellitus, Anemia, Renal Insufficiency, Main diagnosis, Concomitant Disease



Dr. Hadi Al- Sagur
ERCICRLSH2117056

Calculating the Electrocatalytic Activity of Multifunctional Hydrogel Interconnected to Water Soluble Cobalt Phthalocyanine Based Non-Enzymatic Biosensors

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Abstract

Herein, a simple and sensitive method to study the electrochemical behavior of transferred electrons through the interdigitated electrodes (IDEs) for different constructed biosensors by utilizing the electrochemical impedance spectroscopy (EIS). A three-dimensional multifunctional hydrogel interconnected network of water soluble cobalt phthalocyanine (CoPc) in single-layer graphene nanoplatelets (SLGNPs) as non-enzymatic biosensor (GnP-CoPc-SLGNPs/PANI-MFH) has been reported. The fabricated biosensing platforms have been tested to estimate the effective number of electrons during the electrochemical reactions. Structural and morphological studies of the formed hydrogel (PAA-CP/GPL-CoPc-CH) were carried out using scanning electron microscopy (SEM), Fourier-Transform Infrared (FTIR), transmission electron microscopy, (TEM), X-ray diffraction (XRD), and UV-Visible absorption spectroscopy. The electrical conductivity of the detection electrode was studied using electrochemical impedance spectroscopy (EIS) measurements. The enhancement in the electron transfer activity of the modified electrodes will develop the sensitivity of biosensors for biomolecules species detection.

A Review of Postmortem Findings in Patients With COVID-19



Dr. Adenike Eketunde
ERCICRLSH2117057

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Abstract

Multiple public health problems have been caused by various coronavirus strains over the last few years, such as the middle eastern respiratory syndrome (MERS), severe acute respiratory syndrome (SARS), and COVID-19. COVID-19, which is also known as coronavirus disease 2019, was first detected in Wuhan, China, and has significantly impacted people's health and lives. Additionally, it has led to a pandemic, and the virus has spread to over 121 countries worldwide. There is numerous information available regarding this virus. A detailed and extensive study of the morphological and histopathological findings will help understand and diagnose the disease. As it is a new disease, it is challenging to understand the mechanism of the action and disease pathology due to the limited availability of data from autopsies or biopsies. However, as the detailed mechanism of injury remains unclear, this paper aims to review the postmortem gross and histopathological findings of various organs that have been affected with coronavirus, focusing on the pulmonary, cardiac, and hematologic findings. This paper emphasizes the postmortem findings of the effect of the coronavirus disease on multiple organ systems. Advance search of the keywords on PubMed was used, limiting the search to the last five years. The eligible article is narrowed based on relevance containing postmortem findings of the novel virus; COVID-19. A total of 25 full-text articles were selected and used in the review of this paper.

Keywords: Postmortem Pathological Findings, Postmortem, Covid19, Lungs, Cardiovascular, Hematology, Renal



Ahmed Alanzi
ERCICRLSH2117059

Adherence to Guidelines of Pre-operative Antibiotics Prophylaxis in Appendectomy in Bahrain

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Abstract

Appendicitis is most an acute sickness that manifests within 24 hours, although it can also manifest as a chronic disorder, The occurrence of this condition is usually observed at ages ranging from ten to twenty years and with 8.6% lifetime risk in males and 6.7% in females.

The current study was aimed to evaluate the adherence to the antibiotics prophylaxis guidelines in appendectomy in patients admitted to the surgical department of Salmanya medical Complex-Bahrain in 2020. The study included the patients admitted to the surgical department of Salmanya medical Complex-Bahrain in 2020. Only adult patients, who underwent appendectomy, were included in the study while pediatric patients were excluded. The records of the patients, who underwent surgical procedures, were evaluated.

From the records of these patients, information regarding :- Demographic data , Type of antibiotics given for prophylaxis, Timing of the administration of the antibiotics, Any alternative antibiotic is given based on hospital guidelines, was extracted and evaluated. Among 273 patients who were administered with the antibiotics, no one was administered with correct antibiotics as per guidelines of the hospital. 72 (26.37%) patients were administered with antibiotics within or equal to 60 minutes prior to surgical procedure remaining. The current study revealed that the majority of the patients (72%, N=273) admitted to the Salmanya Medical Complex-Bahrain were not administered the antibiotics within the prescribed time as per guidelines from the hospital. Also, the antibiotics administered for prophylaxis prior to the appendectomy procedure were not according to the guidelines i.e. Cefazolin 1g with Metronidazole 500mg. Out of a total of 278 patients included in the study, no one was administered with the right choice as provided by the local guidelines. Secondly, 1.8% of patients (N=278) were not administered with any of the antibiotics for prophylaxis prior to surgical procedure for appendicitis.

Yunqing Liu
ERCICRLSH2120054

BENviewer: A Gene Interaction Network Visualization Server Based on Graph Embedding Model

	<p style="text-align: center;">Yunqing Liu State Key Lab of Bioelectronics, School of Biological Science and Medical Engineering, Southeast University, Nanjing, China</p> <p style="text-align: center;">Abstract</p> <p>BENviewer is a brand-new online gene interaction network visualization server based on graph embedding models. With mature graph embedding algorithms applied on several interaction network databases, it provides human-friendly 2D visualization based on more than 2000 biological pathways, and these results present not only genes involved but also tightness of interactions in an intuitive way. As a unique visualization server introducing graph embedding application for the first time, it's expected to help researchers gain deeper insights into biological networks beyond generating results explainable by existing knowledge. Additionally, operation-flow for users is simplified to greater extent in its current version, meanwhile URL optimization contributes to data acquisition in batch for further analysis. BENviewer is freely available at http://www.bmeonline.cn/BENviewer, besides it's open-sourced at https://github.com/SKLB-lab/BENviewer</p>
<p>Xiaohan Li ERCICRLSH2120055</p>	<p style="text-align: center;">The Mechanism and Detection of Alternative Splicing Events in Circular Rnas</p> <p style="text-align: center;">Xiaohan Li State Key Lab of Bioelectronics, School of Biological Science and Medical Engineering, Southeast University, Nanjing, China</p> <p style="text-align: center;">Abstract</p> <p>Circular RNAs (circRNAs) are considered as functional biomolecules with tissue/development-specific expression patterns. Generally, a single gene may generate multiple circRNA variants by alternative splicing, which contain different combinations of exons and/or introns. Due to the low abundance of circRNAs as well as overlapped with their linear counterparts, circRNA enrichment protocol is needed prior to sequencing. Compared with numerous algorithms, which use back-splicing reads for detection and functional characterization of circRNAs, original bioinformatic analyzing tools have been developed to large-scale determination of full-length circRNAs and accurate quantification. This review provides insights into the complexity of circRNA biogenesis and surveys the recent progresses in the experimental and bioinformatic methodologies that focus on accurately full-length circRNAs identification</p>
<p>Abdulrahman Abduljabbar ERCICRLSH2120056</p>	<p style="text-align: center;">Prevalence of Low Back Pain among Female Nurses Working in Secondary and Tertiary Healthcare, Kingdom of Bahrain</p> <p style="text-align: center;">Abdulrahman Abduljabbar Manama, , Bahrain</p> <p style="text-align: center;">Abstract</p> <p>Background: Occupational related illnesses and injuries have high rates in healthcare settings, and low back pain (LBP) in particular, is considered to be the second most prevalent type of pain and one of the leading musculoskeletal disorders. In addition, LBP has tremendously influenced the rates of absenteeism and performance.</p> <p>Objectives: The objectives of the study were to estimate the prevalence of LBP among nurses and to assess the presence of risk factors, both general and occupational, and the burden caused by LBP.</p> <p>Materials and Methods: This cross-sectional study used a modified questionnaire to obtain its data. The study was conducted among nurses working in secondary and Tertiary Healthcare in Salmaniya Medical Complex, from June 23, 2016, to January 19, 2017; the sample size being 215 nurses.</p> <p>Results: Nearly 73.5% of the studied nurses reported that they have suffered from LBP in the previous year. Using Chi-square, it was found that LBP was significantly prevalent among three of the general risk factor groups: Bahraini nurses (92.5%), nurses younger than 30 (92%) and those with a history of musculoskeletal or rheumatological disorders (90.6%). Only three occupational risk factors were found to be significant: Lifting objects, walking, and running for long distances (81.4%, 79.4%, and 70.8%, respectively). As a result of their LBP, 52.5% of the nurses experienced some restrictions in their movements while 43.7% have visited therapists for</p>

consultations. Regarding absenteeism, out of the 158 nurses who suffered from LBP, 39% took days off because of their LBP.
Conclusion: LBP is highly prevalent in the studied population and is therefore considered a major concern, with consequences on both individual and governmental levels. Hence, more light should be shed on the matter to help reduce its prevalence and its ensuing effects.

Erteng Jia
ERCICRLSH2121072

Effects of Brain Tissue Section Processing and Storage Time on Gene Expression

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Abstract

The pre-processing of samples is important factors that affect the results of the RNA-sequencing (RNA- seq) data. However, the effects of frozen sections storage conditions on the integrity of RNA and sequencing results haven't been reported. The study of frozen section protection schemes can provide reliable experimental results for single-cell and spatial transcriptome sequencing. In this study, RNA was isolated to be studied for RNA from brain section at different temperatures (RT: room temperature, $-20\text{ }^{\circ}\text{C}$) and storage time (0 h, 2 h, 4 h, 8 h, 12 h, 16 h, 24 h, 7day, 3week, 6month). The stability of reference genes was validated using reverse transcription quantitative real-time polymerase chain reaction (qRT-PCR). The results showed that the storage at room temperature significantly affected RNA integrity number (RIN), and the RIN value was lower with the prolongation of storage, while the storage at $-20\text{ }^{\circ}\text{C}$ exerted less effect on the RIN value. Cresyl violet staining for brain tissue sections had little effect on RNA integrity. A total of 892, 478 and 619 genes were shown to be differentially expressed at $-20\text{ }^{\circ}\text{C}$ for 7d, 3w and 6 m, respectively. Among them, the expression of glycoprotein m6a (Gpm6a), calmodulin 1 (Calm1), calmodulin 1 (Calm2), thymosin, beta 4, X chromo- some (Tmsb4x), ribosomal protein S21 (Rps21) and so on were correlated with RNA quality. According to the expression stability of 4 reference genes (Actb; Gapdh; 18S; Hprt1), 18S is the most stable reference gene in the brain. In conclusion, the storage temperature and time of frozen sections have significant effects on RNA integrity and sequencing results. But there are still some genes that are stable and not affected by worsening of overall RNA integrity ie the decrease of RIN value. In addition, 1% cresyl violet staining can protect RNA.

Keywords: Frozen section; RNA integrity; Transcriptomic; Gene

Zhiyu Liu
ERCICRLSH2121073

Analysis of Genome-Wide in Cell Free DNA Methylation: Progress and Prospect

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Abstract

DNA methylation is an important epigenetic marker that affects gene expression. Cell-free DNA methylation detection is a promising approach as abnormal distribution of DNA methylation is one of the hallmarks of many cancers and methylation changes occur early during carcinogenesis. This review summarizes the existing literature and reviews on the detection methods based on next generation sequencing for DNA methylation. The review also discusses the feasibility of detecting cfDNA methylation and the latest progress

**A Rare Case of Pediatric Central Venous Catheter- Related Bloodstream Infection with
Kocuria Varians**

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Abstract

Cases of central line blood infections caused by *Kocuria* spp. are limited in the literature. Most of those infections have been detected in hospitalized patients with severe underlying disease or those with implanted catheters or with suppressed immunity. They are usually non-pathogenic in humans, but few cases of opportunistic infections in adult and pediatric populations have been reported. They can be serious in certain occasions. So treating physicians should not



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ERCICRLSH2121082

	<p>underestimate or ignore the significance of the infection with these bacteria. We report a rare case of central venous catheter (CVC) infection associated with <i>Kocuria varians</i>, which was successfully treated with CVC salvage. Categories: Pediatrics, Infectious Disease Keywords: Pediatric, <i>Kocuria</i>, Central Line Salvage, Invasive Bacterial Infections, Central Line-Associated Infections (Clabsi)</p>
 <p>Zahraa Mansoor ERCICRLSH2121083</p>	<p>Predicting Amputation in Patients with Diabetic Foot Ulcers: A Systematic Review</p> <p>Zahraa Mansoor Surgical Department, Royal College of Surgeons in Ireland, Bahrain</p> <p>Abstract Background: Foot ulcers are a leading cause of morbidity in diabetics. 12% of these patients require an amputation which makes it a major socioeconomic problem. Currently, there's a lack of knowledge on the predictors of amputations in diabetics with foot ulcers. This systematic review aims to identify the predictors of amputation in order to optimize the management strategy and care plan. Methods: This systematic review was performed based on the guidelines in PRISMA 2009 checklist. Medline data base was searched and an inclusion criteria was implemented for the selection of studies. The risk factors extracted were part of 4 categories; (i) History and physical exam (ii) Ulcer characteristics (iii) Lab results (iv) Comorbidities. The data extracted were in the forms of odds ratios, 95% confidence intervals and predictive value. The mean values with standard deviations of the included risk factors were recorded, and the incidence of risk factors among the amputation groups were identified or calculated when the data was sufficient Results and conclusion: 7 articles were selected reporting on 3481 patients. This review identified PAD, neuropathy, high Wagner's grade, Osteomyelitis, PPG, WCC, CRP, ESR, low Hb and albumin, as the most significant predictors of amputation</p>
<p>Daniel Kassahun ERCICRLSH2121084</p>	<p>Assessing Methods to Improve the Completion of Initial Stroke Investigations in a District General Hospital</p> <p>Daniel Kassahun University College London, London, United Kingdom</p> <p>Abstract Stroke ward inpatients in a district general hospital were noted to be missing initial stroke investigations in an appropriate and timely manner. The research team audited the findings and implemented a stroke proforma with the aim to improve adherence. We noted that with the introduction of a paper proforma the completion of initial stroke investigations improved significantly and patients were receiving improved care. This improved further with the introduction of an e-proforma. These results demonstrate how low-cost and rapid introduction of simple measures can improve stroke care for stroke patients. Key words: Innovation, Stroke, Patient Safety, Quality Improvement, Healthcare</p>
<p>Jihad Almoosawi ERCICRLSH2122054</p>	<p>Awareness of Testicular Cancer and Testicular Self-Examination among Men in Bahrain</p> <p>Jihad Almoosawi Salmaniya Medical Complex, The Royal College of Surgeons in Ireland, Manama, Bahrain</p> <p>Abstract Background: Although testicular cancer (TC) is a rare occurring tumor that accounts for 1% of malignancies in men, it is the most common cancer found in adolescents and young men between 15 to 35 years of age. In addition, the rates of TC continue to increase worldwide. In 2013, the annual incidence of TC increased by 2.4% in Sweden, 2.9% in the United Kingdom, 5% in Spain, 3% in Australia, and 3.5% in China (1). No known statistics or studies about TC in Bahrain were found. Aim: The purpose of this study is to assess the level of awareness of Testicular Cancer and comprehension of Testicular Self-Examination amongst men in Bahrain. Methods: A descriptive cross-sectional approach was used to recruit 250 men aged 18 to 60 years. Participants were recruited from public places like malls and parks. Participants were consented and asked to complete a self-administered questionnaire. Descriptive data analysis</p>

using SPSS 22 was performed. Results: Our study showed that awareness among men in Bahrain is only 15% for the total age range, although the percentage of awareness increased with increasing age. Conclusions: Testicular cancer has a high survival rate if detected in an early stage, hence testicular self-examination contributes greatly to the early detection and survival of affected men.



Divyansh Palia
ERCICRLSH2123054

Medicine and Detection of PCOS/PCOD using CNN

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Abstract

Polycystic ovary syndrome (PCOS) is a heterogeneous disorder characterized by hyperandrogenism and chronic anovulation. Depending on diagnostic criteria, 6% to 20% of reproductive aged women are affected. Symptoms of PCOS arise during the early pubertal years. Both normal female pubertal development and PCOS are characterized by irregular menstrual cycles, anovulation, and acne. Owing to the complicated interwoven pathophysiology, discerning the inciting causes is challenging. Most available clinical data communicate findings and outcomes in adult women. Whereas the Rotterdam criteria are accepted for adult women, different diagnostic criteria for PCOS in adolescent girls have been delineated. Diagnostic features for adolescent girls are menstrual irregularity, clinical hyperandrogenism, and/or hyperandrogenemia. Pelvic ultrasound findings are not needed for the diagnosis of PCOS in adolescent girls. Even before definitive diagnosis of PCOS, adolescents with clinical signs of androgen excess and oligomenorrhea/amenorrhea, features of PCOS, can be regarded as being “at risk for PCOS.” Management of both those at risk for PCOS and those with a confirmed PCOS diagnosis includes education, healthy lifestyle interventions, and therapeutic interventions targeting their symptoms. Interventions can include metformin, combined oral contraceptive pills, spironolactone, and local treatments for hirsutism and acne. In addition to ascertaining for associated comorbidities, management should also include regular follow-up visits and planned transition to adult care providers. Comprehensive knowledge regarding the pathogenesis of PCOS will enable earlier identification of girls with high propensity to develop PCOS. Timely implementation of individualized therapeutic interventions will improve overall management of PCOS during adolescence, prevent associated comorbidities, and improve quality of life

Ying Sun
ERCICRLSH2123119

Application of Electrospun Nanofibers in Evaluating the Level of Oxidative Stress in Autistic Children

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Abstract

Autism (ASD) is a disorder caused by the interaction of genetic, environmental and immune factors, accompanied by metabolic abnormalities in a variety of biochemical pathways in the body. Most psychiatric disorders, including autism, are associated with increased oxidative stress. Therefore, it is of great importance to monitor the level of oxidative stress in children with autism. Children with autism have poor sampling coordination, and non-invasive sample (urine) testing is more easily accepted. 2'-Deoxy-7,8-dihydro-8-oxoguanosine (8-OHDG) and 8-oxo-7, 8-dihydroguanosine (8-oxoG), are recognized as the most important markers of DNA and RNA oxidation, respectively. Considering the high polarity of 8-OHDG and 8-oxoG, a solid-phase extraction pre-treatment technology based on polystyrene/polypyrrole (PS/PPY) electrospun nanofibers was designed in this study. The selective interactions between PS/PPY nanofibers and target molecules was utilized to achieve efficient and rapid extraction of 8-OHDG and 8-oxoG. Combined with LC-MS, the determination of 8-OHDG and 8-oxoG in urine was realized. The method has advantages of less sample and harmful reagents consumption,

simple operation and low cost. And it was successfully applied to detect 8-OHdG and 8-oxoG in urine of autistic children. We found that the urinary concentrations of 8-OHdG and 8-oxoG of autistic children was significantly higher than those of normal children, indicating a decrease in the protection against the hydroxyl radical may be a fundamental mechanism in ASD. Urinary 8-OHdG and 8-oxoG concentrations were significantly higher in children with severe autism than in children with non-severe autism, but there was no significant difference between children with mild and moderate autism. This suggests that abnormally high level of oxidative stress may predict severe autism. The established ASD identification model showed that OHdG could be used as the identification index, and the accuracy and specificity were both over 90%.
Keywords: Polystyrene/Polypyrrole Electrospun Nanofibers, Packed-Fiber Solid-Phase Extraction, Autism Spectrum Disorder, Urine Sample, Oxidative Stress

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ERCICRLSH2124052

Seasonal Variation in Cases of Acute Appendicitis

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Abstract

Objectives: To investigate whether the incidence of acute appendicitis increases in summer and whether complicated cases present more in summer. **Methods.** A single-center cross-sectional, retrospective study on 697 cases of appendicitis admitted in the year 2018. **Inclusion criteria:** patients admitted with acute appendicitis who underwent appendectomy of all ages. **Exclusion criteria:** conservative management. **Analysis** was performed using Microsoft Excel. Pearson correlation coefficient was calculated to assess the correlation between monthly incidence of appendicitis and mean temperature in that month. **Results.** Fifty-one patients who were managed conservatively were excluded. Accordingly, 646 patients were included. Ages ranged from three to 77 years. Males comprised the majority (500, 77.4%). Gangrenous, perforated, and purulent appendices were regarded as complicated appendicitis. The highest number of cases were admitted in summer (234), comprising 36.2% of cases. Complicated cases were equal to 65, of which 23 (35.4%) were admitted in summer and 30 (46.2%) in winter. The highest number of cases was during the month of July (68), while the lowest (40) was during February. This corresponded to the highest recorded mean temperature (36.2°C) and second lowest (19.8°C), respectively. Moderate positive correlation (Pearson's R 0.5183) between the monthly incidence of appendicitis and the mean temperature is noted. **Conclusion.** More cases of appendicitis were noted during summer. Monthly incidence correlated positively with the temperature. Larger numbers over several years are needed to draw better conclusions and reach the possible causes behind such variation

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