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KEYNOTE SPEAKER



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GICICHLSR1711053

A cluster-randomized evaluation of an intervention to increase skilled birth attendant utilization in mid- and far-western Nepal

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Abstract

Skilled birth attendant (SBA) utilization is low in remote and rural areas of Nepal. We designed and implemented an evaluation to assess the effectiveness of a five-component intervention that addressed previously identified barriers to SBA services in mid- and far-western Nepal.

We randomly and equally allocated 36 village development committees with low SBA utilization among 1-year intervention and control groups. Implementation was administered by trained health volunteers, youth groups, mothers' groups, and health facility management committee members. Post-intervention, we used mixed-effects regression models to assess and analyze any increase in the utilization of skilled birth care and antenatal care (ANC) services. All analyses were done by intention to treat.

Interviewees included 1,746 and 2,098 eligible women in the intervention and control groups, respectively. Skilled birth care utilization and completion of at least one ANC visit increased significantly (OR = 1.50; CI: 1.14–1.97 and OR = 1.48; CI: 1.03–2.14, respectively) in the intervention group.

The one-year community-intervention was effective in increasing the use of skilled birth care and at least one ANC visit, but was not effective in increasing adequate number of ANC visit. Scaling up of the intervention to other areas with low SBA utilization is recommended to achieve increased use of skilled birth care.

Keywords: cluster randomized controlled trial, evaluation, skilled birth attendants, antenatal care, skilled birth care, barrier, Nepal



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GICICHLSR1711054

Structural and functional studies on a variant of cystatin purified from brain of Capra circus

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Abstract

Cystatins, known for their ubiquitous presence in mammalian system are thiol protease inhibitors serving important physiological functions. Here, we present a variant of cystatin isolated from brain of *Capra hircus* (goat) which is glycosylated but lacks disulphide bonds. Caprine brain cystatin (CBC) was isolated using alkaline treatment, ammonium sulphate fractionation (40–60%) and gel filtration chromatography on Sephacryl S-100HR column with an overall yield of 26.29% and 322-fold purification. The inhibitor gave a molecular mass of ~44 kDa as determined by SDS-PAGE and gel filtration behaviour. The Stokes radius and diffusion coefficient of CBC were 27.14 Å

and $8.18 \times 10^{-7} \text{ cm}^2 \text{ s}^{-1}$, respectively. Kinetic data revealed that CBC inhibited thiol proteases reversibly and competitively, with the highest inhibition towards papain ($K_i = 4.10 \text{ nM}$) followed by ficin and bromelain. CBC possessed 34.7% α -helical content as observed by CD spectroscopy. UV, fluorescence, CD and FTIR spectroscopy revealed significant conformational change upon CBC-papain complex formation. Isothermal titration calorimetry (ITC) was used to measure the thermodynamic parameters – ΔH , ΔS , ΔG along with N (binding stoichiometry) for CBC-papain complex formation. Binding stoichiometry ($N = .97 \pm .07$ sites) for the CBC-papain complex indicates that cystatin is surrounded by nearly one papain molecule. Negative ΔH ($-5.78 \text{ kcal mol}^{-1}$) and positive ΔS ($11.01 \text{ cal mol}^{-1} \text{ deg}^{-1}$) values suggest that the interaction between CBC and papain is enthalpically as well as entropically favoured process. The overall negative ΔG ($-9.19 \text{ kcal mol}^{-1}$) value implies a spontaneous CBC-papain interaction. Key Words: Caprine brain cystatin, thiol proteinase inhibitor, mammalian cystatin, purification, immunodiffusion, spectroscopy, isothermal titration calorimetry



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Antimalaria Therapy and Changes in Oxidative Stress Indices in Falciparum Malaria Infection

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Abstract

Background: Falciparum malaria has been associated with increased generation of reactive oxygen species (ROS) which has been implicated in the disease progression and development of complications.

Objectives: This study assessed some biomarkers of oxidative stress (malondialdehyde (MDA), glutathione (GSH), nitric oxide (NO), total antioxidant capacity (TAC), total plasma peroxides (TPP)), oxidative stress index (OSI) and random plasma glucose (RPG) in individuals with malaria infection with and without antimalarial therapy.

Methods: Ninety consenting subjects (males and females) aged 18 to 60 years comprising of 30 microscopy confirmed subjects with malaria without antimalarial therapy, 20 malaria subjects on antimalarial therapy and a control group of 40 microscopy confirmed subjects without malaria were recruited into this study. The RBG, MDA, GSH, NO, TAC and TPP were determined using colorimetric methods while parasite density (PD) and oxidative stress index (OSI) was obtained by calculation. Anthropometric indices and socio-demographic data were obtained using standard methods. Data were analyzed using ANOVA, LSD post hoc and Pearson's correlation at $p < 0.05$.

Results: The TAC and NO levels were higher and MDA and OSI lower in controls compared to malaria subjects with and without antimalarial therapy ($p < 0.05$). Control subjects had higher GSH and RBG and lower TPP compared to malaria subjects without antimalarial therapy ($p < 0.05$) while malaria subjects on antimalarial therapy had higher GSH, RBG and TAC and lower PD, TPP and OSI compared to malaria subjects without antimalarial therapy. Positive correlations were observed between PD and TPP ($r = 0.660$, $p = 0.002$) and OSI ($r = 0.717$, $p = 0.000$) in malaria subjects on

	<p>antimalarial therapy, and between PD and MDA ($r = 0.399$, $p = .029$) in malaria subjects without antimalarial therapy. Conclusion: Malaria infection may be associated with increased lipid peroxidation and depressed antioxidants and nitric oxide which may be restored by antimalarial therapy. Key words: Malaria, antimalarial therapy, oxidative stress, lipid peroxidation.</p>
<p>Sana Javaid Awan GICICHLSR1711057</p>	<p>Preconditioning can enhance the angiogenesis and anti-oxidative index of adult stem cell derived from different sources</p> <p style="text-align: center;">Sana Javaid Awan The University of Lahore, Pakistan</p> <p style="text-align: center;">Abstract</p> <p>The umbilical cord and bone marrow is an ideal source of stem cells, due to its easy accessibility, abundance, harvesting, and deficiency of ethical issues. Mesenchymal stem cells (MSCs) can be isolated from Wharton's jelly (WJ) of human umbilical cord called Wharton's jelly mesenchymal stromal cells (WJ-MSCs) and from bone marrow called bone marrow mesenchymal stromal cells (BM-MSCs). Chronic kidney disease (CKD) is categorized by progressive damage and functional loss of the renal parenchyma which leads to chronic renal failure. Present study was planned to examine the potential role of WJ-MSCs and BM-MSCs for angiogenesis, wound healing and anti-oxidative index after their pre-treatment. For the pre-treatment of 2nd passage WJ-MSCs and BM-MSCs blood serum from CKD patients (diseased serum) and normal subjects (normal serum) was collected. To estimate the vascular endothelial growth factor (VEGF) levels in different treatment groups sandwich ELISA and immunocytochemistry were done. Wound healing ability and anti-oxidative enzymes were performed in both groups. Anti-oxidants were projected by SOD, CAT, APOX and GSH assay. VEGF levels were found to be decreased in post-treatment group. Similarly, enhanced angiogenesis and improved wound healing show decrease in injury of post-treatment group. Whereas increased levels of anti-oxidative enzymes in post-treatment group resulted in reduction of oxidative stress. Keywords Mesenchymal stem cells, Wharton's jelly mesenchymal stem cells, chronic kidney disease, angiogenesis, wound healing.</p>
<p>Kenechukwu Franklin Chimaobi GICICHLSR1711058</p>	<p>Molecularly PEGylated lipid microparticles encapsulating tioconazole: An intravaginal therapeutic carrier system for localized treatment of vulvovaginal candidiasis (VVC)</p> <p style="text-align: center;">Kenechukwu Department of Pharmaceutics, University of Nigeria, Nsukka 410001, Enugu State, Nigeria</p> <p style="text-align: center;">Attama AA Department of Pharmaceutics, University of Nigeria, Nsukka 410001, Enugu State, Nigeria</p> <p style="text-align: center;">Ibezim EC Department of Pharmaceutics, University of Nigeria, Nsukka 410001, Enugu State, Nigeria</p> <p style="text-align: center;">Nnamani PO Department of Pharmaceutics, University of Nigeria, Nsukka 410001, Enugu State, Nigeria</p> <p style="text-align: center;">Momoh MA Department of Pharmaceutics, University of Nigeria, Nsukka 410001, Enugu State, Nigeria</p> <p style="text-align: center;">Akpa PA. Department of Pharmaceutics, University of Nigeria, Nsukka 410001, Enugu State, Nigeria</p>

	<p style="text-align: center;">Abstract</p> <p>Statement of problems: The use of imidazole antifungals such as tioconazole (TZ) in the treatment of vulvovaginal candidiasis (VVC) is limited by the inability to effectively treat deep-seated VVC with conventional topical formulations. In this study, the potential of intravaginal PEGylated solid lipid micro particles (SLMs) for enhanced antifungal activity of miconazole against <i>Candida albicans</i> was investigated. Methodology: Lipid matrices (LMs) consisting of Softisan® 154 and super-refined sunseed oil with or without polyethylene glycol (PEG) 4000 were prepared by fusion, characterized and employed to formulate SLMs containing TZ by melt-homogenization. The SLMs were evaluated for physicochemical performance and in vitro drug permeation in simulated vaginal fluid (SVF, pH 4.2). Preliminary in vitro anti-candidal activity of all the developed SLMs against high vaginal swab (HVS) of <i>C. albicans</i> was assessed regarding inhibition zone diameter (IZD), while detailed anticandidal studies of the optimized SLMs were performed by determination of killing (death) rate constant and D-value (time required to reduce the microbial population by 90 %). Furthermore, optimized TZ-loaded SLM was evaluated for tolerability by vaginal tolerance test (VTT) in female rabbits. Results and discussion: Spherical discrete microparticles with mean diameters suitable for vaginal drug delivery were obtained. The formulations exhibited good physicochemical properties and adequate IZDs (23.00 ± 0.00 – 28.00 ± 0.79 mm) and at highest concentrations of TZ (3.0 %w/w) and PEG 4000 (4 %w/w) (optimized formulations), gave significantly (p < 0.05) greater drug permeation and faster and more powerful fungicidal activity than controls. The optimized formulations exhibited higher killing rate constant values (1.56 x 10⁻² – 2.16 x 10⁻² min⁻¹) and lower D-values (39.77 – 77.24 min) than commercial topical solution of TZ (Trosoyl®) (1.28 x 10⁻² min⁻¹ and 81.43 min, respectively) and pure TZ sample (1.07 x 10⁻² min⁻¹ and 92.23 min, respectively). This indicates that the drug in its lipo-solubilized state would exhibit better bioactivity than commercial formulations for effective treatment of deep-seated VVC. The VTT result which gave significantly (p < 0.05) lower irritation scores than standard known irritant (sodium lauryl sulphate) indicated that the optimized vaginal SLM is safe. Conclusions: This study has shown that TZ-loaded PEGylated SLMs could be exploited as alternative intravaginal anticandidal drug delivery platform for improved localized TZ action in the vagina, thus providing a better option to deal with deep-seated VVC.</p> <p>Keywords: Tioconazole, Intravaginal drug delivery, <i>Candida albicans</i>, Killing (death) rate constant, PEGylated Solid lipid microparticles.</p> <p>Corresponding author.</p>
<p>MohammedMihoub Zerroug GICICHLR1711059</p>	<p style="text-align: center;">Plant extracts activity against enteroviruses replication.</p> <p style="text-align: center;">Nora Haichour Laboratory of Natural Substances Valorisation, Faculty of Nature and Life Sciences, University Ferhat ABBES Sétif 1(EL BEZ), Sétif 19000, ALGERIA.</p> <p style="text-align: center;">Abdelhalim Khenchouche Laboratory of Applied Microbiology, (LMA) Department of Microbiology, Faculty of Nature and Life Sciences, University Ferhat ABBES Sétif 1(EL BEZ), Sétif 19000, ALGERIA</p> <p style="text-align: center;">Samia Mezaache-Aichour Laboratory of Natural Substances Valorisation, Faculty of Nature and Life Sciences, University Ferhat ABBES Sétif 1(EL BEZ), Sétif 19000, ALGERIA</p> <p style="text-align: center;">MohammedMihoub Zerroug Laboratory of Applied Microbiology, (LMA) Department of Microbiology, Faculty of Nature and Life Sciences, University Ferhat ABBES Sétif 1(EL BEZ), Sétif 19000, ALGERIA</p> <p style="text-align: center;">Abstract</p> <p>Viruses have great medical and economic importance leading to a variety of clinical syndromes and diseases. So far, there was no specific treatment for virus infections. And</p>

	<p>thus, a variety of natural plant products and their derivatives have been tested and used as treatment for human viral diseases. The aim of this work was to evaluate the cytotoxicity and anti-viral activity of tow lyophilized resins extracts. Twenty five g of air-dried of each resin was ground into a fine powder in a blender and mixed with 400 ml boiling water by magnetic stirrer for 1h. Then the aqueous extract was lyophilized after filtration over cheese-cloth and Whatman No. 1 paper, respectively. The non-toxic maximal concentration of the extract was used to measure the percentage of the protective antiviral dose. The antiviral activity was then tested against coxsackie virus (CVB4) replicated on a human pulmonary cells line (Hep-2). Different concentrations of the extracts were used. The cell viability was evaluated by Crystal violet colorimetric assay at 492nm. The CC₅₀ obtained was ranked between 7 and 12.5mg/ml. The propolis extract showed a protective effect against CVB4 at an IC₅₀ of 0.53mg/ml, while the pine extract has a protective effect at 4mg/ml. These encouraging results suggest the possibility of their use in the CVB4 infection control.</p> <p>Key words: cytotoxic activity, antiviral activity, coxsackievirusB4, vegetal resin.</p>
<p>Nora HAICHOOR GICICHL SR1711060</p>	<p>Antioxidant activity of lyophilized aqueous extract of Pinus halepensis (Mill.) resin</p> <p>Nora Haichour Laboratory of Applied Microbiology (LMA), Department of Microbiology, Faculty of Nature and Life Sciences, University Ferhat Abbas Sétif1, Algeria</p> <p>Samia Mezaache-Aichour Laboratory of Applied Microbiology (LMA), Department of Microbiology, Faculty of Nature and Life Sciences, University Ferhat Abbas Sétif1, Algeria</p> <p>El-Khamsa Soltan Laboratory of Applied Microbiology (LMA), Department of Microbiology, Faculty of Nature and Life Sciences, University Ferhat Abbas Sétif1, Algeria</p> <p>Abstract</p> <p>In traditional Algerian medicine, Pinus halepensis resin is used as antimicrobial, anti-inflammatory, analgesic, wound healer, for the treatment of respiratory and urinary diseases, ...etc. In the present study, a lyophilized aqueous extract (LAE) of Pinus halepensis (Mill.) resin is subjected to chemical composition analysis by gas chromatography coupled to mass spectrometry (GC/MS), antioxidant activity is evaluated in vitro using 2,2-diphenyl-1-picrylhydrazyl (DPPH) and β-carotene bleaching assays. Results showed that LAE of Pinus halepensis (Mill.) resin contained 64.57% of aromatic compounds. This extract contains also succinic acid, sugars and alcohol sugars, alkaloids and other compounds that represent respectively 0.58%, 6.45%, 0.87% and 2.05%. Our extract exhibited good antioxidant activity with inhibition percentage of 93.76±0.41 at a concentration of 300µg/ml and IC₅₀ of 83.64µg/ml by the DPPH method. Tested extract showed also a good antioxidant activity using β-carotene test. Antioxidant activity of tested resin LAE is close to that of BHT (standard antioxidant).</p> <p>Key words: Pinus halepensis, resin, GC/MS, antioxidant activity.</p>
<p>Said Ahmad Maisam Najafizada GICICHL SR1711068</p>	<p>Community health workers as human resources for health: a case study of Afghanistan</p> <p>Said Ahmad Maisam Najafizada Faculty of Medicine, Memorial University of Newfoundland</p> <p>Ivy Lynn Bourgeault Faculty of Medicine, University of Ottawa, Ottawa, Canada</p> <p>Ronald Labonte Telfer School of Management, University of Ottawa, Ottawa, Canada</p> <p>Abstract</p> <p>Introduction: There is enough evidence to indicate that Community Health Workers (CHW) are a valuable health workforce in many countries across the globe, addressing</p>

	<p>a chronic shortage of human resources for health. The shortage is not only about the number but also about the distribution and skill mix of the workforce. There is a lack of evidence the size and distribution of CHWs and relation of CHWs among professional, regulated, recognized health workforce such as physicians and nurses on the one hand, and among unregulated and unrecognized health workforce such as traditional birth attendants and traditional healers on the other hand.</p> <p>Aim: The goal of this research is to understand how CHWs are a type of human resources for health in rural Afghanistan, and how they are linked with formal and informal HRH in the Afghan health system.</p> <p>Method: We conducted an exploratory qualitative fieldwork in Afghanistan between 2013 and 2014, collecting data from community members, CHWs, health managers, and policymakers.</p> <p>Results: The number of CHWs has increased dramatically, but inequitably, in Afghanistan. They have a combination of roles; some shifted from professional providers and some of their own such as referral, education, and counselling. Though undertaking professional tasks, CHWs are not linked with professional providers. They do not have a career path and often navigate between formal and informal health care.</p> <p>Conclusion: CHWs are by no means an alternative to professional health providers, but in places where there is no professional provider, CHWs are the only option to meet basic health needs of the population. In places where professional providers are available, CHWs have the potential to extend the services to marginalized populations, provide community health services, and become a member of the health provider team.</p>
<p>Azam Mahmoodi GICICHL SR1711070</p>	<p style="text-align: center;">Studying elderly peoples' health and nourishment in Isfahan</p> <p style="text-align: center;">Azam Mahmoodi RN, MScN, Nursing department, Islamic Azad University, Dehaghan Branch</p> <p style="text-align: center;">Saedeh Razavi RN, MScN, Nursing department, Islamic Azad University, Dehaghan Branch</p> <hr/> <p style="text-align: center;">Abstract</p> <p>Background: The population over 65 year olds is growing fast and because of this there is a need for more attention to be drawn to their health and hygiene. Research shows that because of this sharp increase in the population of over 65s, there has been an increase in the need for health and hygiene facilities. Over 65s are more susceptible to illness than those of a younger age and they also take more time to recover from these illnesses. For social, humanity and economic reasons we must find ways to look after the elderly more.</p> <p>Methods: This is a descriptive study that aimed to assess nutritional status in Isfahan. We conducted some research and randomly chose 150 over 65s and went through a questionnaire while we interviewed them asking questions regarding the quality and quantity of the food they consumed in three days. DFP software components used in food and nutrient standards recommended (RDA) was used to analyze the adequacy of their diet.</p> <p>Results: Our research shows that 49.3% of the over 65s we interviewed had a poor nourishment. The majority of them was standard for Body Mass Index (BMI) and the scarcity of natural vitamins including vitamin B6 and B2, is seen in the high percentage of elderly (91 and 72%). The majority of cases (57 percent) had a deficient intake of energy and protein.. Distribution of carbohydrate, protein and fat in daily nutrition was appropriate but Lack of them in their food intake. only in the consumption of bread and cereals are consistent with international standards. There was meaningful relationship between nutrition status and variables of marital status, economic status, social and cultural.</p> <p>Conclusions: As a result of the findings we have gathered through out research, we recommend that extra information be given to elderly people regarding their health and nourishment in order to reduce their problems with regards to illness.</p> <p>Key words: nourishment, elderly, hygiene.</p>
<p>Neha Rajwar GICICHL SR1711072</p>	<p style="text-align: center;">Population dynamics of earthworms on various Himalayan ecotypes of Kumaun Himalayas</p>

	<p style="text-align: center;">Neha Rajwar Department of Zoology, Kumaun University, Nainital-263002, Uttarakhand, India</p> <p style="text-align: center;">Satpal Singh Bisht Department of Zoology, Kumaun University, Nainital-263002, Uttarakhand, India</p> <p style="text-align: center;">Abstract</p> <p>The population dynamics of earthworms along the altitudinal gradient from agricultural land to forest land from sub-mountain region to the mountainous region in the North popularly Known as Himalayas was studied. The study is made to determine whether the abundance of clitellate and non-clitellate earthworms is related to the physico-climatic factors or soil biotic characteristics. We found that the density and diversity varied significantly along the altitudinal gradient with the change in seasons for two years. The number of earthworm species significantly increased as elevation increased and in rainy season it was quite high due to the adequate amount of decomposed matter and moisture present in the soil. From this study it is concluded that the difference in the population dynamics of clitellate and non-clitellate earthworm species richness along with the altitudinal gradient with seasonal variation is may be due to combination of biotic and soil physical factors. The depth of soil layer is an important factor as predictors of number of earthworms along the altitudinal gradient with seasonal variation.</p> <p>Keywords: earthworms, kumaun Himalayas, population dynamics, altitudinal variation</p>
 <p>Foluke Sangokoya GICICHLSR1711076</p>	<p style="text-align: center;">The influence of the internet on health seeking behaviour of nursing mothers in ekiti state, nigeria.</p> <p style="text-align: center;">Adeosun, F.O Health Studies/Humanities, University Of South Africa, Pretoria, South Africa</p> <p style="text-align: center;">Folayan, O.F Health Studies/Humanities, University Of South Africa, Pretoria, South Africa</p> <p style="text-align: center;">Adedeji B.O Health Studies/Humanities, University Of South Africa, Pretoria, South Africa</p> <p style="text-align: center;">Abstract</p> <p>The use of search engines through internet services to investigate health-related issues is now on the increase among nursing mothers in Nigeria. Very little studies have been conducted to explore the influence the internet has on the health seeking behaviour of nursing mothers in Nigeria. This study investigates the influence of the internet on health seeking behaviours of nursing mothers, examines the extent to which the internet provides answers to health related questions among nursing mothers, determines the perception of nursing mothers on internet's influence on their health seeking, and finds out whether the use of internet increases or reduces self medication among nursing mothers in Ekiti State. A standardized 20-question survey on Internet use and health seeking behaviour was given to 150 nursing mothers in Ekiti State. A review of the literature is also included. It was discovered that out of 142 responses received, 109 nursing mothers (76.7%) reported using the Internet to find health information. 105 nursing mothers (96.3%) out of the 109 consult the internet for answers to their babies' health problems before consulting a doctor or a care giver. 81% of the nursing mothers adhere to the online physician's advice thereby leading to self-medication. An aggregate of 132 (93%) nursing mothers submitted that the internet influences their health seeking decisions. Conclusively, the tests of hypothesis show a significant relationship between the use of internet and health seeking behaviours of nursing mothers and also, between the use of internet and self medication among them.</p> <p>Key words: Internet, Nursing mothers, Health seeking behaviour, self medication.</p>
<p>Chia-Ling Chen GICICHLSR1711078</p>	<p style="text-align: center;">Nursing process of bronchial pleural fistula With Pneumonectomy</p>

	<p style="text-align: center;">Chia-Ling Chen Far Eastern Memorial Hospital Nursing Department, Taipei, Taiwan</p> <p style="text-align: center;">Abstract</p> <p>Klebsiella an opportunistic infection of bacteria, is also caused by pulmonary abscess is one of the most common aerobic bacteria. Cases of Klebsiella infection caused lung abscess, RUL and LUL necrotizing pneumonia, bronchoscopy showed LUL, RML, RLL a large number of purulent sputum, undergoes multiple operations, including VATS RUL lobectomy, VATS decortication of pleura, Thoracoscopic pneumectomy. Right bronchus for right lung necrotizing pneumonia s / p right pneumectomy + Elosser flap RMB stump poor healing, Right chest wall resection and thoracoplasty, 106.02.01 Right pleura dead space with bronchus leakage, Right Pleura dead space with bronchus leakage, Myocutaneous rotation flap.</p> <p>After multiple operations, each postoperative wound care and pain control to become a major focus, how to allow patients to have a good postoperative care and promote wound healing and reduce respiratory complications, as the goal of care.</p> <p>Using Gordon's eleven functional health profiles as a framework for nursing assessment, data were collected through observation, talks and physical assessment, and the main health problems and the use of care measures.</p> <p>Key word : Pneumonectomy, bronchial pleural fistula(BPF)</p>
<p>Khalid M. Alkharfy GICICHL SR1711081</p>	<p style="text-align: center;">Thymoquinone modulates nitric oxide production and improves organ dysfunction of sepsis</p> <p style="text-align: center;">Khalid M. Alkharfy Department of Clinical Pharmacy, College of Pharmacy, King Saud University, Riyadh 11451, Saudi Arabia</p> <p style="text-align: center;">Abstract</p> <p>Aims: The present investigation was designed to evaluate the effect of thymoquinone in a septic animal model and to explore the role of nitric oxide (NO) in the process.</p> <p>Materials and Methods: To achieve this, mice (n=12 per group) were treated in parallel with thymoquinone (0.75 mg/kg/day) and/or NG-nitro-L-arginine methyl ester (L-NAME; 400 µg/g/day) prior to sepsis induction with live <i>Escherichia coli</i>.</p> <p>Key findings: Thymoquinone significantly improved renal and hepatic functions alone and in combination with L-NAME. This was associated with less NO production and lower oxidative stress in treated animals. Tumor necrosis factor-α concentration with thymoquinone and L-NAME were 36.27 \pm3.41 pg/ml and 56.55 \pm5.85 pg/ml, respectively, as opposed to 141.11 \pm6.46 pg/ml in septic controls. Similarly, Interleukin-1α, 2, 6 and 10 levels decreased significantly upon treatment with thymoquinone and L-NAME as compared with untreated septic animals. NF-κB and NF-κB-DNA binding activity in nuclear proteins were also significantly down-regulated. Vascular responsiveness studies in isolated mouse aortae demonstrated a reduced relaxation to acetylcholine exposure in septic mice treated with thymoquinone.</p> <p>Conclusion: These findings suggest that thymoquinone prevents sequels of the multiple organ failure syndrome of sepsis by modulating the production of NO and its inflammatory sequela, and adjusting vascular responsiveness.</p>
<p>Augusta Chinyere Nsonwu-Anyanwu GICICHL SR1711082</p>	<p style="text-align: center;">Heavy metals, antioxidant and oxidative stress indices in infertile men</p> <p style="text-align: center;">Augusta Chinyere Nsonwu-Anyanwu Medical Laboratory Science Department, University of Calabar, Cross River State, Nigeria.</p> <p style="text-align: center;">Sunday Jeremiaiah Offor Medical Laboratory Science Department, University of Calabar, Cross River State, Nigeria.</p> <p style="text-align: center;">Edmund Richard Egbe, Medical Laboratory Science Department, University of Calabar, Cross River State, Nigeria.</p>

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Abstract

Background: Oxidative stress associated with antioxidant depletion and elevated heavy metal levels has been implicated in abnormal sperm function and male infertility. The serum and seminal heavy metals, antioxidants and biomarkers of oxidative stress were assessed in a population of infertile men.

Methods: A total of 90 consenting married men aged 20-60 years undergoing investigations for infertility were consecutively recruited and categorized into 3 groups based on sperm function test; Azoospermic (n=20), Oligospermic (n=35) and Normospermic controls (n=20). Semen analysis was done, serum and seminal heavy metals (zinc (Zn), selenium (Se), cadmium (Cd) and lead (Pb)) were determined using Atomic Absorption Spectrometry, antioxidants (reduced glutathione (GSH) and vitamin C (vit C)), biomarkers of oxidative stress (malondialdehyde (MDA), nitric oxide (NO), total antioxidant capacity (TAC), total plasma peroxides (TPP)) and fructose were determined using colorimetric methods while oxidative stress index (OSI) was estimated by calculation. Data was analysed using ANOVA, LSD post hoc and Pearson correlation analysis at $p < 0.05$.

Results: Normospermic men had significantly higher percentage motility, sperm count, seminal (fructose, vit C, TAC, NO), serum (GSH, NO, TAC, Zn) and lower levels of seminal (TPP and OSI) and serum (TPP, OSI, Pb and Cd) compared to Oligospermic and Azoospermic men ($p < 0.05$). Oligospermic men had higher higher percentage motility, sperm count, seminal TAC and NO, and lower levels of seminal (TPP, OSI, Pb and Cd) and serum OSI compared to Azoospermic men ($p < 0.05$). Negative correlations were observed between seminal fructose and seminal vitamin C ($r = -0.535$, $p = .015$), GSH ($r = -0.734$, $p = .000$), NO ($r = 0.714$, $p = .000$), Zn ($r = 0.774$, $p = .000$) and Se ($r = 0.719$, $p = .000$) only in azoospermic men.

Conclusion: Increased heavy metals levels and lipid peroxidation, and decreased antioxidants may be associated with abnormal sperm function and infertility.

Key words: Heavy metals, antioxidants, oxidative stress, infertility

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Exposure to Exhaust Gas and Alterations in Homeostasis of Lead, Cadmium and
Oxidative Stress Indices in Automobile Workers.

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	<p style="text-align: center;">Abstract</p> <p>Background: Chronic exposure to automobile exhaust gas has been associated with chronic lung diseases, and oxidative stress has been implicated. This study assessed the serum levels of some biomarkers of oxidative stress (malondialdehyde (MDA), glutathione (GSH), nitric oxide (NO), total antioxidant capacity (TAC), total plasma peroxides (TPP)), oxidative stress index (OSI), cadmium (Cd) and lead (Pb) in relation to duration of exposure to exhaust gas in automobile workers.</p> <p>Methods: A total of one hundred (100) male subjects aged between 18-60 years comprising of 60 automobile workers (40 automobile mechanics and 20 automobile spray painters) and 40 non- automobile workers (controls) were recruited into this study. The malondialdehyde, glutathione, nitric oxide, total antioxidant capacity and total plasma peroxides were estimated by colorimetry, cadmium and lead by atomic absorption spectrophotometry and oxidative stress index by calculation. Anthropometric indices, blood pressure and socio-demographic data were obtained using standard methods. Data were analysed using ANOVA, LSD post hoc and Pearson's correlation at $p < 0.05$.</p> <p>Results: The TPP, MDA, OSI, NO, Pb and Cd levels were higher and TAC and GSH lower in auto mechanics and spray painters compared to the controls ($p < 0.05$). Automobile spray painters had higher MDA, Pb and Cd levels compared to automobile mechanics ($p < 0.05$). Positive correlations were observed between duration of exposure and TPP ($r = 0.853, p = 0.000$), OSI ($r = 0.821, p = 0.000$), Pb ($r = 0.799, p = 0.000$) and Cd ($r = 0.711, p = 0.000$) in automobile workers.</p> <p>Conclusion: Exposure to automobile exhaust gas is associated with increased nitric oxide, toxic elements, lipid peroxidation and oxidative stress with depletion of antioxidants which may be aggravated by increasing duration of exposure.</p> <p>Key words: exhaust gas, elements, antioxidants, lipid peroxidation, oxidative stress</p>
<p>Aniekan Etokidem GICICHLR1711085</p>	<p style="text-align: center;">Increasing utilization of maternal healthcare services using community-based advocacy groups and attitudinal re-orientation of healthcare providers in a Nigerian rural community: a qualitative study.</p> <p style="text-align: center;">Aniekan Etokidem Department of Community Medicine, Faculty of Medicine, University of Calabar, Calabar, Nigeria.</p> <p style="text-align: center;">Benson Obu Department of Community Medicine, University of Calabar Teaching Hospital, Calabar, Nigeria.</p> <p style="text-align: center;">Abstract</p> <p>Low utilization of facility-based maternal healthcare services is a key contributor to Nigeria's poor maternal health indices. In Cross River State, only 46% of pregnant women had at least four government health facility antenatal care visits and only 39% of deliveries took place in the health facilities. The state's maternal mortality rate of 2000/100,000 women of reproductive age is one of the highest in Nigeria. The objective of this intervention study was to assess the impact of using community-based maternal healthcare advocacy groups and attitudinal re-orientation of healthcare providers on utilization of maternal healthcare services.</p> <p>Materials and methods</p> <p>This study took place in Biase Local Government Area of Cross River State, Nigeria. It was an intervention study. Community-based advocacy groups such as role model mother networks were constituted and trained on advocacy, communication and social mobilization. Pregnant women were paired to peer-influence each other. Referrals by traditional birth attendants were tracked. There was attitudinal re-orientation training for healthcare providers.</p> <p>Results</p> <p>There was an average of 25% increase in ante-natal care attendance and delivery while some facilities recorded up to 50%. Ninety-one percent of traditional birth attendants</p>

	<p>identified and referred high risk pregnancies. Members of pregnant women pairs found the peer influence of each other a source of support, encouragement and inspiration to utilize maternal healthcare services.</p> <p>Conclusion Using community-based advocacy groups and attitudinal re-orientation of health care providers is a useful strategy for increasing maternal healthcare services utilization.</p> <p>Keywords: maternal, child, health.</p>
<p>Ogochukwu Fidelia Offu GICICHLSR1711089</p>	<p style="text-align: center;">The impact and practice of community pharmacy on public health management in enugu metropolis, Nigeria</p> <p style="text-align: center;">Ogochukwu Fidelia Offu (BPharm, MmedScPH, M.Pharm, FPCPharm) Head, Department of Clinical Pharmacy and Biopharmaceutics, Faculty of Pharmaceutical Sciences, Enugu State University of Science and Technology (ESUT), Agbani, Enugu State, Nigeria.</p> <p style="text-align: center;">Abstract</p> <p>The increasing impact and practice of Community Pharmacy in strategic public health activities, management and administration in Nigeria in general and Enugu State metropolis in particular define the overall need for integral, participatory, and inclusive public health best management practices in Nigeria. Systematically, the burgeoning gap between real Community Pharmacy practice and Public Health management and administration in Nigeria suffice the raison d'être for a deliberate, collaborative, targeted, proactive and integrated health management policy as advocated by this study. The unprecedented rise in prevalence of chronic diseases has led to an increased pressure in the Nigeria public health delivery systems, hospitals and health research. Community pharmacy practice as such, provides a somewhat basic one-stop health care integrated system to impact conscionable health practice among the ailing public; to improve the health status of the public proactively and sufficiently with coordinated referral system. The study also aims to identify and determine the capability of the community pharmacists to carry out public health activities effectively; identify and assess the basic health activities that are feasible to be carried out in community pharmacies including the timely dispensation of targeted interventions that will encourage and boost the practice of public health activities sufficiently and efficiently; enhance the overall health indices and economic ecology of community pharmacy practice as cogent public health outfit in the state; to identify barriers and milestones that will assist policy makers/regulators to allocate and utilize resources prudently; to accelerate and improve the grossly insufficient or dilapidating public health infrastructure in Enugu metropolis and Nigeria in general.</p> <p>The study consisted of a cross sectional study after which a Delphi study (of three rounds) was carried out. Pre-tested and validated questionnaires were the instruments of data collection. Comprehensive spread sheet analyses of cross-sectional data were determined by SPSS among other un/structured scientific methods to reach consensus. The results indicate and implicate the urgent need for inclusive health policy in Nigeria; barriers identified include: inadequate funding and staff, public corruption and regulation, insufficient knowledge, lack of time and space, poor cooperation of clients and poor or dearth of interoperability measures etc. 81 feasible public health activities and 18 interventions were identified from the Delphi study. 11 experts participated in each round of the Delphi study. Out of the 88 items suggested to be feasible by the experts in the first round of the Delphi study, consensus was reached for 81 items by the end of the third round. By the end of the third round, consensus was reached for 18 out of 20 interventions that were suggested by the experts in the first round. The study concluded that the overall health system gap (impact and implication) between community pharmacy practice and public/primary health care delivery system in Enugu-Nigeria is grave and needed urgent public-private conscionable, collaborative, articulated and practicable intervention. The time is now!</p>
<p>Prof Dr. Donma Mustafa Metin GICICHLSR1711090</p>	<p style="text-align: center;">The importance of some new clinical indices in the evaluation of childhood obesity</p> <p style="text-align: center;">Donma Mustafa Metin Department of Pediatrics, Medical Faculty, Namik Kemal University, Tekirdag, Turkey</p>

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Abstract

Childhood obesity is a multisystem disease, which requires the attention of health professionals, because it is associated with severe complications and potentially negative results. In pediatric age group, obesity leads to hypertension, dyslipidemia, chronic inflammation, increasing tendency in blood coagulation, endothelial dysfunction and hyperinsulinemia, all of which may be considered as important risk factors for cardiovascular and cardiometabolic diseases. Accurate evaluation of obesity in children requires difficult and detailed investigation.

Assessment of anthropometric measurements, as well as some ratios, is important because of the evaluation of gender differences particularly during the late periods of obesity. In our investigations, obesity in children was evaluated using new body fat ratios and indices.

Within this context, recently developed indices; “Diagnostic Obesity Notation Model Assessment” (DONMA) indices; DONMA Index-I and DONMA Index-II were introduced. DONMA Index-I derived from weight and height as well as DONMA Index-II derived from total body fat mass and height were given. Our studies has revealed that body ratios and formula based upon body fat tissue are more valuable parameters than those based on weight and height values for the evaluation of obesity in children.

Obesity, an important health problem in children, has been evaluated with anthropometric measurements and recently developed formulas, as well as body fat ratios from a different point of view. Our researches was carried out to establish recent approaches for the prevention of obesity and the profile observed during late stages of the disease.

Obesity is a clinical condition, which is associated with low-grade inflammation. Childhood obesity is an ever increasing global health problem, affecting both developed and developing countries. The aim of our studies is the evaluation of some clinical parameters and indices from the gender point of view in obese children due to the increasing rates of obesity detected in pediatric age group.

Key words: Obesity; childhood; index; gender

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Tension Watch: Blood Pressure Monitoring Tool and Early Warning on Cardiovascular Disease

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Abstract

Tensino watch is a medical device used as a blood pressure monitor and as an early warning of cardiovascular disease. Cardiovascular disease is a disease caused by impaired heart and blood vessel function, such as: coronary heart disease, heart failure, hypertension and stroke. With this patient can respond quickly in tackling the disease. This device is able to show the pressure of venous blood vessels in the body safely and properly .Tensino Watch can measure the pressure of veins by utilizing pressure

	<p>sensors. Pressure from the pressure sensor will be processed into data so it can know the value of blood pressure that is sistol and diastol pressure. So it can know the value of the blood pressure of the user. Tensino Watch is designed to assist in the early handling of cardiovascular disease at regular intervals. So that handling is done quickly and precisely. Tensino watch uses air pressure pumped into the air bag. Then the pressure inside the bag will be measured by the pressure sensor. Then the results will be displayed on the LCD screen directly. Tensino watch has been able to work well on the width of the hand 5-10 cm with a delay time of 3-10 seconds. Data is processed by occilotmetric method with ramp down approach. This tool produces observational data with error value of 10%. Tool will provide early warning via buzzer. This tool is very potential to be developed and can be used in various health facilities such as hospitals, and personal service physicians especially for the elderly. It is expected that with this tool then the mortality rate due to cardiovascular disease can be reduced. Kata kunci: tensino watch, early warning, blood pressure, monitoring, tensimeter.</p>
<p>Atiquah Aziz GICICHLRSR1711096</p>	<p>Efficacy of Methanolic Crude Extracts of Pseuduvaria Macrophylla on the Human Breast Cancer Cell Line (MCF7) - effect of concentration</p> <p style="text-align: center;">Aziz Department of Orthorhinolaringology, Faculty of Medicine, University of Malaya, 50603 Kuala Lumpur, Malaysia</p> <p style="text-align: center;">Z. A. Bakar Department of Orthorhinolaringology, Faculty of Medicine, University of Malaya, 50603 Kuala Lumpur, Malaysia</p> <p style="text-align: center;">F. Z. M. Yusof Faculty of Applied Science, University Technology MARA, 40450 Shah Alam, Selangor, Malaysia,</p> <p style="text-align: center;">Abstract</p> <p>Preliminary study on the anti-oxidant and anti-cancer activities has been done on different parts of Pseuduvaria macrophylla (Annonaceae) in methanolic and hexanolic crude extracts. This species is a Malaysian local plant naturally found at montane forest area and traditionally has been used to treat clinical symptoms. Previous study demonstrated promising anti-cancer potential in methanolic crude extracts using single concentration especially on breast cancer cells under 24 hours treatment. The present study investigate the efficacy concentration of bark and leaf methanolic extract on MCF-7 breast cancer cell line under 48 and 72 hours of treatment. The method employed was MTT assay to determine the half maximal inhibitory concentration (IC₅₀) of both extracts at different concentration under 48 & 72 hours of treatment. The IC₅₀ was obtained by plotting the coccentration (µg/mL) versus the percentage of inhibition of each extracts. The MCF7 cell line had decrease response to both extracts within 72 hours but showing promising cytotoxicity within 48 hours especially for leaf methanolic extracts at concentration of 140 µg/mL to inhibit 50% of tested cancer cell line, meanwhile the medium inhibitory concentration (IC₅₀) of bark methanolic extract on MCF7 cells was 160 µg/mL. The results showed that the the IC₅₀ of leaf methanolic extracts was comparably lower than the IC₅₀ of bark methanolic extracts. In fact, leaf methanolic extracts demonstrated better efficacy on the MCF7 after been treated within 48 hours compared to 72 hours. In other words, leaf methanolic extract more potent than bark methanolic extracts. Keywords Annonaceae, MTT assay, IC₅₀, MCF-7 cell line.</p>
<p>Afshan Shafi GICICHLRSR1711098</p>	<p style="text-align: center;">Research Article Anti-hyperlipidemic Effect of Melon Seed Oil: A Potential Bio-therapeutic</p> <p style="text-align: center;">Afshan Shafi Department of Food Science & Technology, Muhammad Nawaz Shareef University of Agriculture, Multan, Pakistan</p> <p style="text-align: center;">Umar Farooq</p>

	<p>Department of Food Science & Technology, Muhammad Nawaz Shareef University of Agriculture, Multan, Pakistan</p> <p>Kashif Akram Institute of Food Science and Nutrition, Bahauddin Zakariya University, Multan, Pakistan</p> <p>Abstract Hyperlipidemia is a disease condition that is categorized by deposition of cholesterol in arteries, which in turn narrow the flow of blood to heart and brain and result in progression of many chronic diseases like hypertension, cardiac failure, and atherosclerosis. Melon seed oil synergistic combination mono- and poly-unsaturated fatty acids that can possess antihyperlipidemic effect. Antihyperlipidemic effect of melon seed oil was examined in hyperlipidemic rabbits as an animal model. Hyperlipidemic condition in rabbits was induced through hyperlipidemic diet. After the development of hyperlipidemic condition, the hyperlipidemic rabbits were fed on treatment diet containing melon seed oil in various concentrations. Blood of animals was analyzed for cholesterol, triglycerides, high density lipoproteins, low density lipoproteins and other biochemical parameters after every week of study period of 6 weeks. The results indicated that a significant decline in total cholesterol contents, triglycerides and low density lipoprotein was observed whereas only high density lipoprotein contents were increased up to remarkable level. The other biochemical parameters's analysis gave results in favor of melon seed oil. So, it is concluded from the results of study that cholesterol, triglycerides, low density lipoproteins and very low density lipoprotein contents were decreased whereas high density lipoprotein contents were increased in the blood of rabbits fed on melon seed oil. Key words: Synbiotic yoghurt, Hyperlipidemia, Antihyperlipidemic effect</p>
<p>Hasan Shahbazi GICICHL SR1711100</p>	<p>Factors affecting self-care performance in adolescents with type I diabetes according to the PEN-3 cultural model</p> <p>Hasan Shahbazi Ph.D. Candidate, Department of Health Education & Health Promotion, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran.</p> <p>Fazlollah Ghofranipour Professor, Department of Health Education and Health Promotion, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran. Email:</p> <p>Parisa Amiri Research Center for Social Determinants of Endocrine Health and Obesity Research Center, Research Institute for Endocrine Sciences, Shahid Beheshti University of Medical Sciences, Tehran, Iran</p> <p>Asadollah Rajab Pediatrician, Iran Diabetes Association, Tehran, Iran.</p> <p>Abstract Objective: The purpose of this study was to examine sociocultural and structural factors associated with regular self-care behaviors among adolescents with type 1 diabetes and improve related group therapy sessions using the PEN-3 cultural model. Methods: This is a mixed methods study, which was conducted on adolescents with type I diabetes who referred to the Iranian Diabetes Association in 2016. To identify perceptions, enablers, and nurturers related to regular self-care behaviors, the first phase involved in-depth interviews with 12 adolescents aged 14-19 years, 10 parents and 4 diabetes specialists and group discussions with 13 participants in the individual interviews that provided good experience to us involved in individual interview. In the second phase the results of the previous phase in a descriptive study via a questionnaire involving 120 patients with diabetes were studied and in three phase were determined entry point to the intervention.</p>

	<p>Findings: The most common positive perceptions, enablers and nurturers included awareness of self-care behaviors, attitudes toward the impact of spirituality on self-care, easy access to needed medical services and maternal support. Negative perceptions, enablers and nurturers included negative attitudes towards why disease and why me, low self-efficacy, limited training, high cost of blood glucose test strips, lack of educational therapeutic curriculums based on spirituality, ignoring the role of spirituality in treatment and self-care, conflict between parents and patients.</p> <p>Conclusions: The results of this study can be used to guide the development of culturally group therapy interventions aimed at increasing adherence to self-care behaviors among Iranian adolescents with type 1 diabetes.</p> <p>Keywords: Type I diabetes, Self-care, Adolescents, PEN-3 model</p>
<p>Umar Farooq GICICHLSR1711102</p>	<p style="text-align: center;">Diabetes and its natural treatment Antidiabetic effect of persimmon peel on alloxan induced diabetic rabbits</p> <p style="text-align: center;">Afshan Shafi Department of Food Science & Technology, Muhammad Nawaz Shareef University of Agriculture, Multan, Pakistan</p> <p style="text-align: center;">Umar Farooq Department of Food Science & Technology, Muhammad Nawaz Shareef University of Agriculture, Multan, Pakistan</p> <p style="text-align: center;">Kashif Akram Institute of Food Science and Nutrition, Bahauddin Zakariya University, Multan, Pakistan</p> <p style="text-align: center;">Abstract</p> <p>Background: Diabetes, a condition when body fails to normalize the blood glucose level properly and the level goes beyond the normal range. Natural treatments particularly through bioactive components from fruit and vegetable sources are becoming popular worldwide and are broadly accepted because of no side effects and cost effectiveness. Persimmon belongs to family Ebenaceae having several bioactive compounds with potential antidiabetic activity. However, information on the antidiabetic effect of persimmon is scanty.</p> <p>Objective: The present study was planned to investigate the antidiabetic potential of persimmon peel powder by using alloxan induced diabetic rabbits as an animal model.</p> <p>Methods: Fifteen rabbits were induced diabetes mellitus by alloxan and divided into three groups. Persimmon peel powder supplemented diets (0%, 10% and 20%) were given to the diabetic rabbits for the duration of 21 days. The blood samples of rabbits were examined for glucose, serum creatinine and urea levels on weekly basis. The results indicated that there was a significant decline in glucose level in the blood of diabetic</p> <p>Results: The reduction of blood glucose level was from 357.66 mg/dl to 256.45 mg/dl when feed was supplemented with 20% persimmon peel powder. Similarly, serum creatinine and urea levels were also significantly reduced because of supplementation of persimmon peel powder.</p> <p>Conclusion: It is concluded from the results that persimmon pulp powder might be a potential natural antidiabetic treatment of diabetic complications.</p> <p>Keywords: Diabetes, Antidiabetic potential, Persimmon peel</p>
<p>Kashif Akram GICICHLSR1711103</p>	<p style="text-align: center;">Potential impact of bio-fortification for prevention of anaemia</p> <p style="text-align: center;">Afshan Shafi Department of Food Science & Technology, Muhammad Nawaz Shareef University of Agriculture, Multan, Pakistan</p> <p style="text-align: center;">Umar Farooq Department of Food Science & Technology, Muhammad Nawaz Shareef University of Agriculture, Multan, Pakistan</p>

	<p style="text-align: center;">Kashif Akram Institute of Food Science and Nutrition, Bahauddin Zakariya University, Multan, Pakistan</p> <p style="text-align: center;">Abstract</p> <p>Anemia is a physiological disorder in which a body cannot produce enough healthy red blood cells which carry hemoglobin. If body is not supported by enough red blood cells, then a person may experience symptoms of anemia. Globally, in developing countries, 40–45% of children are suffering from anaemia and this figure raised upto 60–70% in Southeast Asia. The main causes of anaemia include mineral and vitamin deficiencies (malnutrition). Its treatment depends upon the cause and severity of the condition which mainly include medicines, surgery, supplements and dietary changes including (more intake of mineral and vitamins enriched or fortified foods). For the purpose, some countries have effective food fortification and supplementation programmes but their overall success remains limited due to many factors. The major factors or hurdles include the use of synthetic sources as well as presence of binding compounds which reduce the bioavailability of the nutrients. So among the existing interventions bio-fortification seems to be the safe and natural way for the prevention and treatment of anaemia which not only enhances the micronutrient contents in fermented foods but also increase the bioavailability with no side effects. This techniques is considered economically feasible, efficient, eco-friendly and attractive alternative to alleviate malnutrition.</p> <p>Key words: Biofortification, anaemia, microorganisms, fermented food</p>
<p>Yayehyirad yemane GICICHLSR1711104</p>	<p>Assessment of the associated factors, management and complications of uterine rupture at mizan-tepi university teaching hospital, mizan-aman town, bench-maji zone, snnprs, south west ethiopia, 2016/17.a case control study</p> <p style="text-align: center;">Mr. Yayehyirad yemane Midwifery,Mizan-Tepi University,Ethiopia</p> <p style="text-align: center;">Mr.workineh gizaw Midwifery,Mizan-Tepi University,Ethiopia</p> <p style="text-align: center;">Abstract</p> <p>Background: Uterine rupture is tearing of the uterine wall during labor or delivery. Rupture of a previously unscarred uterus is usually a catastrophic event resulting in death of the baby, extensive damage to the uterus and sometimes even maternal death from blood loss.The overall incidence of uterine rupture is 1 in 2,000 deliveries. In developing countries, uterine rupture is more prevalent and is a serious problem.</p> <p>Objective: To Asses the associated factors, management and complications of uterine rupture in Mizan-Tepi University Teaching hospital, Mizan-Aman town, Bench-Maji Zone, SNNPRS ,South west Ethiopia, 2016/17.</p> <p>Methodology: A Hospital based unmatched multi-factorial case-control study was employed from 1st October - 30th October 2016. The required sample size gave us a total of 352 Delivery Charts by considering case to control ratio of 1:4 , of these 71 were Delivery Charts with Uterine Rupture and 281were Delivery Charts without uterine Rupture were selected by using lottery method. Data was retrieved using pre-tested and structured data extraction format from operation notes, delivery registers and patients cards documented from2013-2015G.C. Using SPSS version 20 software, descriptive statistics ,bivariate and multivariate logistic regression analysis was done and p-value <0.2 and ≤0.05 were considered as significant during bivariate and Multivariate logistic regression analysis Respectively . AOR with 95% CI was used to control for possible confounders and to interpret the result.</p> <p>Result- From 1st January 2013 up to 31st December 2015 there were a total of 9878 Deliveries from these 71 Cases of uterine rupture were recorded giving an incidence of 1 in 139 Deliveries. Predisposing factors for uterine rupture were No antenatal care (AOR 4.08 95% CI 1.924-8.651), Labor Duration>18hrs (OR 2.769 95% CI 1.231-6.226), parity ≥ 5(AOR 6.16 95% CI 2.886-13.148), Having Obstructed Labor (AOR 2.714 95% CI 1.228-5.720), No use of Partograph (AOR 2.248,95% CI 1.049-</p>

	<p>4.817).There were 7 maternal deaths due to uterine rupture during the study period. Conclusion-Uterine rupture still remains one of the major causes of maternal and newborn morbidity and mortality .The prenatal mortality for both case and controls is high in Mizan-Tepi University Teaching Hospital. Key words – uterine rupture, associated factors, management, and complications.</p>
<p>Robera Olana Fite GICICHLSR1711106</p>	<p>Predictors of Therapeutic Communication between Nurses and Admitted Patients at Jimma University Specialized Hospital, Jimma Zone, Ethiopia</p> <p style="text-align: center;">Robera Olana Fite Department of Nursing, College of Health Science and Medicine, Woliata Sodo University, Ethiopia</p> <p style="text-align: center;">Abstract</p> <p>Background: Therapeutic communication is a purposeful interaction between health professionals and patients. There is a pressing need for research that focuses on factors influencing it. However, little is known about it. Therefore, this study was aimed at identifying predictors of therapeutic communication between nurses and admitted patients at Jimma University Specialized Hospital, Jimma zone, Ethiopia, 2016. Methods: Institution based cross-sectional study was conducted at the Jimma University Specialized Hospital from March 21 to April 9, 2016. 192 study participants recruited using stratified sampling technique.. Interviewer administered questionnaire was employed as the data-collection tool Principal component analysis, Independent t-test, one-way ANOVA, simple and multivariable linear regressions were applied using a statistical package for Social Sciences (SPSS) version 20. A P-value less than 0.05 were taken as significant association. Result: 192 admitted patients at the Jimma University Specialized Hospital participated in the study, obtaining a response rate of 96%. The study revealed that 67(34.9%) of the patients rated high level of therapeutic communication. Significant predictors of therapeutic communication were educational status ($\beta=5.870, P=0.011$), language difference ($\beta= -6.002, P=0.014$), education difference ($\beta=5.208, P=0.010$) and Perceived patient view score ($\beta=3.573, P<0.001$) Conclusion: The implementation level of therapeutic communication was low. Education, language difference, education difference and perceived patient view scores were significant predictors of therapeutic communication. Key words: Therapeutic, communication, predictors, admitted patients, nurses</p>
<p>Yirui Deng GICICHLSR1711107</p>	<p>Predicting Risk of Cervical cancer using Artificial Neural Network and Logistic Regression</p> <p style="text-align: center;">Yirui Deng Student, Bellevue High School, Bellevue, USA</p> <p style="text-align: center;">Betty Wang, Ivy Analytics LLC</p> <p style="text-align: center;">Abstract</p> <p>Objective: This study aims to 1) examine the predictors of cervical cancer 2) build a predictive model for cervical cancer using artificial neural network and compare its performance to logistic regression model. Methods: Cervical cancer (Risk Factors) Data Set was used for this study. This dataset focuses on the prediction of indicators/diagnosis of cervical cancer. The features cover demographic information, habits, and historic medical records. All the participants who were eligible were randomly assigned into 2 groups: training sample and testing sample. Two models were built using training sample: artificial neural network and logistic regression. We used these two models to predict the risk of cervical cancer in the testing sample. Receiver operating characteristic (ROC) were calculated and compared for these two models for their discrimination capability and a curve using predicted probability versus observed probability were plotted to demonstrate the calibration measure for these two models. Results: About 6.74% (n=45) of 668 were patients with cervical cancer. According to the</p>

	<p>logistic regression, patients with longer use of hormonal contraceptives, higher number of STD diagnosis, and cervical intraepithelial neoplasia diagnosis were at higher risk of cervical cancer.</p> <p>According to this neural network, the top 5 most important predictors were smoking in years, number of STD diagnosis, diagnosis of CIN and number of sexual partners as well as diagnosis of other cancer.</p> <p>For training sample, the ROC was 0.65 for the Logistic regression and 0.74 for the artificial neural network. Artificial neural network performed better clearly. However in testing sample, the ROC was 0.58 for the Logistic regression and 0.55 for the artificial neural network. Artificial neural network had worse performance.</p> <p>As to calibration measure, predictions made by the neural network are (in general) less concentrated around the 45-degree line (a perfect alignment with the line would indicate an ideal perfect calibration) than those made by the Logistic model.</p> <p>Conclusions: In this study, we identified several important predictors for cervical cancer e.g., number of sexual patterns, hormonal contraceptives. This provided important information for providers and patients to provide timely intervention. We built a predictive model using artificial neural network as well as logistic regression to provide a tool for early detection. As to performance of these two models, logistic regression had a similar discriminating capability and a better calibration between predicted probability and observed probability.</p>
 <p>Bazeka Bayalamo Samuel GICICHLSR1711108</p>	<p style="text-align: center;">Resume of novelphysiotherapie</p> <p style="text-align: center;">Bazeka Bayalamo Samuel Department Of Animal Sciences, University Of Congo, Kinshasa Democratic Republic Of Congo</p> <p style="text-align: center;">Abstract</p> <p>Novel Physiotherapy is an open access, academic, well-established, international journal which is dedicated to publishing high quality manuscripts focus on Novel Physiotherapy and physical Rehabilitation. The peer reviewed journal which aims to advance physiotherapy practice and research through academic publication and creates scientific platform is take into consideration all most update and outstanding research articles, commentaries, reviews or systematic or modern papers, opinions, scientific data, letters, editorials, case reports, technical reports, regular book reviews and short communication etc. in all major areas of Novel Physiotherapy and advancement of physical rehabilitation professions. The academic Journal also aims to foster research capacity within the Profession and encourages of submission from new researchers and physiotherapists.</p> <p>Novel Physiotherapy is dedicated to publishing and disseminating all most up-to-date and special articles in all topics in neurological, musculoskeletal, sports rehabilitation and cardiopulmonary from a wide range of social and cultural perspectives to help audiences understand the varied backgrounds in which rehabilitation clinical practice is undertaken. It provides information on health and rehabilitation sciences including Nursing, Medicine, Pharmacy, Dentistry, Occupational Therapy, Physiotherapy, Speech Therapy, Biotechnology, Orthotics & Prosthetics, etc. Journal of Novel Physiotherapy and Physical Rehabilitation is a premier journal which publishes all types of scientific data in the field of advancement of physiotherapy, rehabilitation and shows path for the discovering new methods or mechanisms for curing of chronic diseases. The Journal is at the right time available, and is generously accessible internationally through internet to share innovations to the researchers for scholarly advancement in this field.</p> <p>Novel Physiotherapy</p> <ul style="list-style-type: none"> • Evidence base for physiotherapy • Physiotherapy • Sport and Physical Activity • Advances in Neurorehabilitation Techniques • Exercise Physiology • Physical Activity and Quality of Life in Chronic Disease • Occupational therapy • Emerging Rehabilitation Techniques

<p>Donma Orkide GICICHLSR1711110</p>	<p>• Speech and language therapy</p> <p>Progranulin: is it a new adipocytokine at the crossroads of obesity, metabolic syndrome and cancer?</p> <p>Donma Orkide Prof. Dr., Department of Medical Biochemistry, Cerrahpasa Medical Faculty, Istanbul University, Istanbul, Turkey</p> <p>Donma Mustafa Metin Prof. Dr., Department of Pediatrics, Medical Faculty, Namik Kemal University, Tekirdag, Turkey</p> <p>Abstract</p> <p>In recent years, an autocrine growth and survival factor progranulin (PGN) existed as a critical regulator of transformation in some cancer models. It stimulates the proliferation and survival of several cancer cell types. Obesity increases the risk for metabolic as well as cardiovascular diseases, and is linked to an increased incidence and aggressiveness of various cancers. Obesity alters biological properties and functions of adipose stem cells (ASCs). Increased amount of adipose tissue leads to higher numbers of ASCs in the tumor site. They impact cancer progression through adipocytokines and growth factors. Our studies investigate adipocytokine profiles including that of PGN in the way going from morbid obesity to metabolic syndrome (MetS) in children. Prepubertal morbid obese (MO) children and those with MetS (MO+MetS) were included in our studies. World Health Organization age- and sex-dependent body mass index percentile tables were used for the classification of obesity. MetS criteria were defined. Anthropometric measurements, blood pressure values, lipid and glucose metabolism-related parameters, obesity-related adipocytokines were determined and recorded. Statistical evaluations were performed. Our studies have pointed out an increasing trend going from MO towards MO+MetS group in terms of PGN. PGN and ASCs contribute to tumour microenvironment. Elevated PGN as well as the recruited ASCs can promote angiogenesis and also stimulate growth, invasion and metastasis of cancer cells. The children with MetS have the tendency of developing severe diseases such as cancer in their future lives. Obesity is a major public health problem because it increases the risks for many severe chronic diseases including cancer. Elevated PGN levels may promote tumor growth, serve as a potential clinical biomarker in cancer and be associated with the increased cancer risk in children with MetS. As a new molecule, PGN may provide a new intervention target for molecular treatment options. Key words: Children; progranulin; obesity; metabolic syndrome; cancer</p>
<p>Youssef Boudi, Mostafa GICICHLSR1711111</p>	<p>Adopting an Open Source Hospital Information System to manage Moroccan Health Institutions</p> <p>Youssef Boudi, Mostafa Laboratory of Informatics, Modeling and Systems (LIMS)</p> <p>Azzouzi Idrissi, Laboratory of Informatics, Modeling and Systems (LIMS)</p> <p>Noureddine Rais University of Sidi Mohamed Ben Abdallah (USMBA) Fez, Morocco</p> <p>Abstract</p> <p>In this paper, we present a comparative study of Open Source Hospital Information Systems (OSHISs) to adopt a solution for first and second levels of health institutions in Morocco. We choose open source because these organizations are still suffering from problems in management, budget, resources and computerization. There exist several and different solutions, but the literature review did not allow us to find a similar comparison to get the best one in meeting our needs, which prove the great interest in</p>

	<p>our study.</p> <p>In our study, we retrieved nine OSHISs: MediBoard, OpenEMR, OpenMRS, OpenHospital, HospitalOS, PatientOS, Care2x, MedineTux and HOSxP. To compare their qualities we used the three-dimensional model proposed by the DeLone & McLean: system, information and technical support in order to judge the quality of service. To get the technical measures we used the concept of technical debt through the SQALE method. Finally, we evaluated OSHISs activities using statistics from open source community.</p> <p>SonarQub is a SQALE implementation that select six evaluated characteristics for MediBoard (respectively OpenEMR, OpenMRS, OpenHospital, HospitalOS, PatientOS, Care2x, MedineTux and HOSxP) with a technical debt of 42.16% (respectively 53.23%, 54.5%, 65%, 66.1%, 65.2%, 56.96%, 52.13% and 75.5%) as a SQALE Quality of Technical Support. In the other hand, evaluating the OSHISs activities prove the MediBoard potential confirmed by Open Source Community with 2381 commits and 12 contributions in 2016.</p> <p>These results has favorited MediBoard as the best solution to solve problems that suffers our health organizations, it is also a challenge to prove the open source power in improving health sector in Morocco as a developing country.</p> <p>As a future work, we will implement MediBoard, test it in hospital to collect user's feedbacks, re-adapt it to their needs and improve its quality according to their suggestions.</p> <p>Keywords Health System, Hospital Information System, Open Source, SQALE, Technical Debt.</p>
<p>Mahrus Aldiansyah GICICHLR1711113</p>	<p>House Of Hope For Street Children (Punks) In Order To Create A Healthy Younger Generation And Their Future Bright</p> <p>Mahrus Aldiansyah University Of Jember, Department Of Public Health Indonesia</p> <p>Abstract</p> <p>The disease of HIV/AIDS has become a serious problem for teenagers who seem to never find the solution and prevention efforts. As is the case in the area of Jember, based on data compiled statistics Indonesia, East Java, the distribution of the HIV cases that occurred in Jember peaked four se-East Java. The disease of HIV/AIDS in teenagers started from a level of awareness of the youth against the disease is low. This raises an issue that often comes up and has been familiar in the ears of society Indonesia especially in urban environment which would be of minimal concern for one another. Basically a variety of programs to prevent the disease has been repeatedly encouraged by the Government with the hope that these programs will be able to prevent the occurrence of disease, but it is currently not many shows the result. Families and communities are less likely to care about the State of the teens that occurred at this time, the teenagers who lack concern and scrutiny of the families and communities concerned about negative activities in the fall can cause the disease HIV/AIDS. According to a survey we did, in Jember are still widely found in socialization of teenagers unhealthy and places of localization that is very close to the lives of teenagers, this thing certainly became one of the causes of the large number of cases of HIV occur in Jember. Then to cope growing worsening of the HIV/AIDS problem that occurs naturally need a preventative program designed which can increase awareness and concern of teens on the importance of understanding the disease and can provide stimulation to the family and the community to always watch over and care for the teenagers. With the existence of "House Of Hope" expected future teenagers can have a high concern to the environment and have a positive activity so as to avoid conscious and alert on activities that could be the cause of disease of HIV/AIDS.</p> <p>Keywords: Disease Of HIV/AIDS, Youth, Prevention</p>
<p>Zheng Xie GICICHLR1711062</p>	<p>Reformulation and Generalisation of the Fleiss Kappa</p> <p>Zheng Xie Lecturer, School of Engineering, University of Central Lancashire, UK</p>

	<p style="text-align: center;">Gadepalli Lecturer, School of Engineering, University of Central Lancashire, UK</p> <p style="text-align: center;">B.M.G. Cheetham Lecturer, School of Engineering, University of Central Lancashire, UK</p> <p style="text-align: center;">Abstract</p> <p>The assessment of consistency in the categorical or ordinal decisions made by observers or raters is an important problem especially in the medical field. The Cohen Kappa, Fleiss Kappa and Intra-class Correlation (ICC), as commonly used for this purpose, are compared and a generalised approach to these measurements is presented. It is shown that the Fleiss Kappa may be reformulated as a true generalisation of the Cohen Kappa and may be linearly, quadratically or otherwise weighted. The relationship between quadratically weighted Cohen Kappa and pairwise ICC is clarified and generalised to Fleiss Kappa and multi-rater ICC.</p>
 <p>Ali Mokhtassi-Bidgoli GICICHLR1711069</p>	<p style="text-align: center;">Reduce the use of herbicides in pistachio orchards towards environmental and human health</p> <p style="text-align: center;">Ali Reza Faghihi-Sereshki Department of Agronomy, Faculty of Agriculture, Tarbiat Modares University, PO Box 14115-336, Tehran, Iran</p> <p style="text-align: center;">Ali Mokhtassi-Bidgoli Department of Agronomy, Faculty of Agriculture, Tarbiat Modares University, PO Box 14115-336, Tehran, Iran</p> <p style="text-align: center;">Mohammad Reza Naeini Horticulture Crops Research Department, Qom Agricultural and Natural Resources Research and Education Center, Agricultural Research, Education and Extension Organization, Qom, Iran</p> <p style="text-align: center;">Abstract</p> <p>Maintaining or improving garden and field plant yields on existing farmed land is necessary. One of these plants is pistachio. Best known as the pistachio, <i>Pistacia vera</i> is a small tree native to Iran, grown for its edible seeds. One of the limiting factors in successful production of pistachio is often weeds which usually control by herbicides because other control measures are limited, difficult and laborious. Glyphosate and paraquat are the world's most widely used herbicides. Numerous scientific studies over multiple decades have raised concerns about harmful impacts of these herbicides. For example, glyphosate is classified as a probable human carcinogen which is found in urine samples of farmers and city dwellers alike. Keeping in view the above situations, this investigation was undertaken to evaluate the strengths and weaknesses of weed control at specific stages during pistachio growth period. The experiment was conducted in a randomized complete block design with three replications. The treatments consisted of two different periods of weed interference, a critical weed-free period, and a critical time of weed removal. Periods were the end of sprouting, the end of flowering, the end of kernel growth, the beginning of kernel filling, the end of kernel filling, nut splitting and harvest. Result showed that there was no significant difference between treatments in terms of yield. With regard to quantitative and qualitative traits, herbicide could be applied only from the end of kernel filling until harvest whenever needed. Thus, herbicide use can be reduced if farmers can identify the critical period of weed control with one well-timed herbicide application.</p> <p>Keywords: Crops-weed interactions, Chemical control, Dynamics, Environmental issues</p>
<p>Wan-Ling Chiu GICICHLR1711079</p>	<p style="text-align: center;">Usage of wearable devices for recording self-monitoring of blood glucose among prediabetes patients</p> <p style="text-align: center;">Wan-Ling Chiu Clinical laboratory, taipei city hospital yangming branch, taipei, taiwan</p> <p style="text-align: center;">Yu-Hsuan Shao</p>

	<p>Graduate institute of biomedical informatics, Taipei medical university, Taipei, Taiwan</p> <p style="text-align: center;">Abstract</p> <p>Objectives: The World Health Organization (WHO) released a report on Diabetes, which requires attention to the prevention and treatment of diabetes. Taiwan's diabetes should be estimated to be over 1.5 million. The wearable devices and application software can help people to restore health, this case has Prediabetes but they don't consciously, and in this stage can return to normal blood glucose range.</p> <p>Methods: The Prediabetes population performed self-monitoring of blood glucose (SMBG) for three months, twice a week, Divided into three groups, APP、handwritten and control group.</p> <p>Monitoring blood glucose before and after the intervention value differences, This experiment is the use of wearable devices to monitor prediabetes patients with self-monitoring of blood glucose to achieve a drop in blood sugar or blood glucose levels in the normal range.</p> <p>Results: The results showed that the use of wearable devices with application software can reduce the benefits of blood glucose are better than handwritten sugar diary and control group. Which affect the results of the most living habits and the patient's own health care awareness. Especially for waist reduction and triglyceride reduction effect. However, one of the priorities of diabetes is weight loss.</p> <p>Conclusion: In the past, people will be sick to seek medical treatment, but after the symptoms are often irresponsible medical treatment, maybe need for long-term medication.</p> <p>But now is different, we can use the wearable devices combined smart phone application software can effectively analyze the health information, so we can understood health status , when an abnormal signal appears the instrument can be instantly monitored for medical personnel to know, It is very effective for doctors and patients to treat or prevent disease.</p> <p>Keywords: prediabetes, smbg, wearable devices</p>
<p>Jingxi Luo GICICHL SR1711086</p>	<p style="text-align: center;">Electron Transport in the Alpha Helix</p> <p style="text-align: center;">Jingxi Luo</p> <p style="text-align: center;">Affiliation: Department of Mathematical Sciences, Durham University, UK</p> <p style="text-align: center;">Abstract</p> <p>In a biological structure with periodic geometry, such as an alpha-helical protein, an extraneous electron can become trapped in a strongly bound state, due to electromagnetic interactions with the helix. The study of such bound electrons takes inspiration from the theory of solid state physics, in which an electron coupled to a crystal lattice is known as a polaron. It has been theorised that certain conditions can cause the polaron to move along the helix, transporting energy with it. We present a new mathematical model describing the dynamics of polarons in linear polypeptides, and show that under some reasonable physical assumptions the system is equivalent to that of polaron dynamics in an alpha helix. Our model permits polaron propagation along the polypeptide, if an appropriate external electric field is imposed on the system. In particular, an electric field comprising a constant and a periodic component can induce polaron motion with minimal energy loss, thus providing an efficient mechanism for electron transport. Thermal fluctuations due to temperature in the environment can also facilitate polaron propagation. We discuss the biophysical implications of our results, including the fact that a typical electric field in our model has a constant component which matches the typical transmembrane resting potential in a eukaryotic cell. We therefore propose that our model could be used to explain the process of electron transport across cell membranes.</p> <p>Keywords: Protein, alpha helix, electron transport, mathematical modelling</p>



Neha Rajwar
GICICHLR1711072

Population dynamics of earthworms on various Himalayan ecotypes of Kumaun Himalayas

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Abstract

The population dynamics of earthworms along the altitudinal gradient from agricultural land to forest land from sub-mountain region to the mountainous region in the North popularly Known as Himalayas was studied. The study is made to determine whether the abundance of clitellate and non-clitellate earthworms is related to the physico-climatic factors or soil biotic characteristics. We found that the density and diversity varied significantly along the altitudinal gradient with the change in seasons for two years. The number of earthworm species significantly increased as elevation increased and in rainy season it was quite high due to the adequate amount of decomposed matter and moisture present in the soil. From this study it is concluded that the difference in the population dynamics of clitellate and non-clitellate earthworm species richness along with the altitudinal gradient with seasonal variation is may be due to combination of biotic and soil physical factors. The depth of soil layer is an important factor as predictors of number of earthworms along the altitudinal gradient with seasonal variation.

Keywords: earthworms, kumaun Himalayas, population dynamics, altitudinal variation

Khalid M. Alkharfy
GICICHLR1711081

Thymoquinone Modulates Nitric Oxide Production And Improves Organ Dysfunction Of Sepsis

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Abstract

Aims: The present investigation was designed to evaluate the effect of thymoquinone in a septic animal model and to explore the role of nitric oxide (NO) in the process.

Materials and Methods: To achieve this, mice (n=12 per group) were treated in parallel with thymoquinone (0.75 mg/kg/day) and/or NG-nitro-L-arginine methyl ester (L-NAME; 400 µg/g/day) prior to sepsis induction with live Escherichia coli.

Key findings: Thymoquinone significantly improved renal and hepatic functions alone and in combination with L-NAME. This was associated with less NO production and lower oxidative stress in treated animals. Tumor necrosis factor- α concentration with thymoquinone and L-NAME were 36.27 ± 3.41 pg/ml and 56.55 ± 5.85 pg/ml, respectively, as opposed to 141.11 ± 6.46 pg/ml in septic controls. Similarly, Interleukin-1 α , 2, 6 and 10 levels decreased significantly upon treatment with thymoquinone and L-NAME as compared with untreated septic animals. NF- κ B and NF- κ B-DNA binding activity in nuclear proteins were also significantly down-regulated. Vascular responsiveness studies in isolated mouse aortae demonstrated a reduced relaxation to acetylcholine exposure in septic mice treated with thymoquinone.

Conclusion: These findings suggest that thymoquinone prevents sequels of the multiple organ failure syndrome of sepsis by modulating the production of NO and its inflammatory sequela, and adjusting vascular responsiveness.

Prof.Dr.Mustafa Metin Donma
GICICHLR1711090

The Importance Of Some New Clinical Indices In The Evaluation Of Childhood Obesity

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	<p style="text-align: center;">Abstract</p> <p>Childhood obesity is a multisystem disease, which requires the attention of health professionals, because it is associated with severe complications and potentially negative results. In pediatric age group, obesity leads to hypertension, dyslipidemia, chronic inflammation, increasing tendency in blood coagulation, endothelial dysfunction and hyperinsulinemia, all of which may be considered as important risk factors for cardiovascular and cardiometabolic diseases. Accurate evaluation of obesity in children requires difficult and detailed investigation. Assessment of anthropometric measurements, as well as some ratios, is important because of the evaluation of gender differences particularly during the late periods of obesity. In our investigations, obesity in children was evaluated using new body fat ratios and indices.</p> <p>Within this context, recently developed indices; “Diagnostic Obesity Notation Model Assessment” (DONMA) indices; DONMA Index-I and DONMA Index-II were introduced. DONMA Index-I derived from weight and height as well as DONMA Index-II derived from total body fat mass and height were given. Our studies have revealed that body ratios and formula based upon body fat tissue are more valuable parameters than those based on weight and height values for the evaluation of obesity in children. Obesity, an important health problem in children, has been evaluated with anthropometric measurements and recently developed formulas, as well as body fat ratios from a different point of view. Our researches were carried out to establish recent approaches for the prevention of obesity and the profile observed during late stages of the disease. Obesity is a clinical condition, which is associated with low-grade inflammation. Childhood obesity is an ever increasing global health problem, affecting both developed and developing countries. The aim of our studies is the evaluation of some clinical parameters and indices from the gender point of view in obese children due to the increasing rates of obesity detected in pediatric age group.</p> <p>Key words: Obesity, Childhood, Index, Gender</p>
<p>Donma Orkide GICICLSR1711110</p>	<p style="text-align: center;">Progranulin: Is It A New Adipocytokine At The Crossroads Of Obesity, Metabolic Syndrome And Cancer?</p> <p style="text-align: center;">Orkide Donma Prof. Dr., Department of Medical Biochemistry, Cerrahpasa Medical Faculty, Istanbul University, Istanbul, Turkey</p> <p style="text-align: center;">Mustafa Metin Donma Prof. Dr., Department of Pediatrics, Medical Faculty, Namik Kemal University, Tekirdag, Turkey</p> <p style="text-align: center;">Abstract</p> <p>In recent years, an autocrine growth and survival factor progranulin (PGN) existed as a critical regulator of transformation in some cancer models. It stimulates the proliferation and survival of several cancer cell types. Obesity increases the risk for metabolic as well as cardiovascular diseases, and is linked to an increased incidence and aggressiveness of various cancers.</p> <p>Obesity alters biological properties and functions of adipose stem cells (ASCs). Increased amount of adipose tissue leads to higher numbers of ASCs in the tumor site. They impact cancer progression through adipocytokines and growth factors. Our studies investigate adipocytokine profiles including that of PGN in the way going from morbid obesity to metabolic syndrome (MetS) in children.</p> <p>Prepubertal morbid obese (MO) children and those with MetS (MO+MetS) were included in our studies. World Health Organization age- and sex-dependent body mass index percentile tables were used for the classification of obesity. MetS criteria were defined. Anthropometric measurements, blood pressure values, lipid and glucose metabolism-related parameters, obesity-related adipocytokines were determined and recorded. Statistical evaluations were performed.</p> <p>Our studies have pointed out an increasing trend going from MO towards MO+MetS group in terms of PGN. PGN and ASCs contribute to tumour microenvironment. Elevated PGN as well as the recruited ASCs can promote angiogenesis and also stimulate growth, invasion and metastasis of cancer cells. The children with MetS have</p>

	<p>the tendency of developing severe diseases such as cancer in their future lives. Obesity is a major public health problem because it increases the risks for many severe chronic diseases including cancer. Elevated PGN levels may promote tumor growth, serve as a potential clinical biomarker in cancer and be associated with the increased cancer risk in children with MetS. As a new molecule, PGN may provide a new intervention target for molecular treatment options. Key words: Children, Progranulin, Obesity, Metabolic Syndrome, Cancer</p>
<p>Youssef Boudi GICICHLSR1711111</p>	<p>Adopting an Open Source Hospital Information System to manage Moroccan Health Institutions</p> <p>Youssef Boudi Laboratory of Informatics, Modeling and Systems (LIMS)</p> <p>Mostafa Azzouzi Idrissi University of Sidi Mohamed Ben Abdallah (USMBA) Fez, Morocco</p> <p>Nouredine Rais University of Sidi Mohamed Ben Abdallah (USMBA) Fez, Morocco</p> <p>Abstract</p> <p>In this paper, we present a comparative study of Open Source Hospital Information Systems (OSHISs) to adopt a solution for first and second levels of health institutions in Morocco. We choose open source because these organizations are still suffering from problems in management, budget, resources and computerization. There exist several and different solutions, but the literature review did not allow us to find a similar comparison to get the best one in meeting our needs, which prove the great interest in our study.</p> <p>In our study, we retrieved nine OSHISs: MediBoard, OpenEMR, OpenMRS, OpenHospital, HospitalOS, PatientOS, Care2x, MedineTux and HOSxP. To compare their qualities we used the three-dimensional model proposed by the DeLone & McLean: system, information and technical support in order to judge the quality of service. To get the technical measures we used the concept of technical debt through the SQALE method. Finally, we evaluated OSHISs activities using statistics from open source community.</p> <p>SonarQub is a SQALE implementation that selects six evaluated characteristics for MediBoard (respectively OpenEMR, OpenMRS, OpenHospital, HospitalOS, PatientOS, Care2x, MedineTux and HOSxP) with a technical debt of 42.16% (respectively 53.23%, 54.5%, 65%, 66.1%, 65.2%, 56.96%, 52.13% and 75.5%) as a SQALE Quality of Technical Support. In the other hand, evaluating the OSHISs activities prove the MediBoard potential confirmed by Open Source Community with 2381 commits and 12 contributions in 2016.</p> <p>These results has favorited MediBoard as the best solution to solve problems that suffers our health organizations, it is also a challenge to prove the open source power in improving health sector in Morocco as a developing country.</p> <p>As a future work, we will implement MediBoard, test it in hospital to collect user's feedbacks, re-adapt it to their needs and improve its quality according to their suggestions.</p>

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