

# Index Medicus for the WHO Eastern Mediterranean Region

with Abstracts



## IMEMR Current Contents

December 2015

Vol. 14 No. 4



# **Index Medicus for the WHO Eastern Mediterranean Region**

with Abstracts

**IMEMR Current Contents**

**December 2015**

**Vol. 14 No. 4**

© World Health Organization 2015

All rights reserved.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate borderlines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use.

Publications of the World Health Organization can be obtained from Health Publications, Production and Dissemination, World Health Organization, Regional Office for the Eastern Mediterranean, P.O. Box 7608, Nasr City, Cairo 11371, Egypt (tel: + 202 2276 043, fax: +202 22765 424; email: [emrgoksp@who.int](mailto:emrgoksp@who.int)). Requests for permission to reproduce, in part or in whole, or to translate publications of WHO Regional Office for the Eastern Mediterranean – whether for sale or for noncommercial distribution – should be addressed to *Regional Adviser, Global Arabic Programme*, WHO Regional Office for the Eastern Mediterranean, at the following address: email: [emrgoeqp@who.int](mailto:emrgoeqp@who.int).

Design, layout and printing by WHO Regional Office for the Eastern Mediterranean, Cairo, Egypt

ISSN: 2071-2510

# Table of Contents

<b>IMEMR Current Contents</b> .....	<b>vii</b>
-------------------------------------	------------

<b>Subject Index</b> .....	<b>ix</b>
----------------------------	-----------

Accidents, Traffic.....	1
Adenoma, Pleomorphic.....	1
Adrenergic beta-Antagonists.....	1
Alcoholism.....	2
Alismataceae.....	2
Alveolar Bone Loss.....	2
Amputation.....	3
Anemia, Sickle Cell.....	3
Anti-Inflammatory Agents, Non-Steroidal.....	3
Antineoplastic Agents.....	4
Antioxidants.....	4
Antipyrine.....	5
Artemisia.....	5
Arthroplasty, Replacement, Hip.....	5
Ascorbic Acid.....	6
Aspirin.....	6
Asthma.....	6
Atrial Fibrillation.....	7
Automobile Driving.....	7
Behcet Syndrome.....	8
beta-Thalassemia.....	8
Bioelectric Energy Sources.....	8
Biofuels.....	9
Biomedical Technology.....	9
Biomphalaria.....	9
Blood Glucose.....	10
Bone Diseases, Metabolic.....	10
Boswellia.....	11
Branchio-Oto-Renal Syndrome.....	11
Breast Neoplasms.....	11
Caffeine.....	13
Caloric Restriction.....	13
Candida albicans.....	13
Caprolactam.....	14
Carbazoles.....	14
Carbonates.....	15
Carcinoma, Hepatocellular.....	15
Carcinoma, Mucoepidermoid.....	15
Carcinoma, Non-Small-Cell Lung.....	16
Cardio-Renal Syndrome.....	16
Cardiovascular System.....	17
Carica.....	17
Cataract Extraction.....	17

Catfishes .....	18
Caulerpa .....	18
Cesarean Section .....	19
Chest Pain.....	20
Child Development.....	20
Child Welfare.....	20
Cholangiopancreatography, Endoscopic Retrograde .....	21
Cholecystectomy, Laparoscopic .....	21
Chronic Periodontitis.....	21
Citrus .....	22
Communication .....	22
Coronary Artery Disease.....	22
Counseling.....	23
Critical Illness.....	23
Cryopreservation.....	24
Cynara scolymus.....	24
Cystine.....	24
Cystinosis.....	25
Cytochrome P-450 CYP2C9.....	25
Dental Caries .....	25
Depressive Disorder, Major.....	26
Diabetes Mellitus, Type 2.....	26
Diabetes, Gestational .....	27
Diabetic Nephropathies.....	27
Diazinon.....	28
Doxorubicin .....	28
Doxycycline .....	29
Drug Prescriptions.....	29
Dyslipidemias .....	29
Education, Medical.....	30
Educational Measurement .....	30
Eicosapentaenoic Acid.....	31
Elaeagnaceae.....	31
Electrocoagulation .....	31
Electronic Prescribing.....	32
Electronic Waste .....	32
Emergency Medicine .....	33
Endometrial Neoplasms .....	33
Endometrium .....	33
Enterobacteriaceae .....	34
Epididymitis.....	34
Epilepsy .....	34
Erythrocytes .....	35
Evidence-Based Dentistry.....	35
Ferula .....	35
Fetal Membranes, Premature Rupture .....	35
Fibroma .....	36
Folic Acid Deficiency.....	36
Forests.....	37
Galactans.....	37
Gastric Mucosa.....	38

Gastrointestinal Agents.....	38
Gastrointestinal Hemorrhage.....	39
Glomerular Filtration Rate.....	39
Goiter .....	40
Granuloma, Giant Cell .....	40
Groundwater.....	40
Health Services Research .....	41
Hearing Aids .....	41
Hearing Loss, Noise-Induced.....	41
Heart Defects, Congenital .....	42
Hemangioma, Cavernous, Central Nervous System.....	42
Hemoptysis.....	42
Hepatitis B.....	43
Hepatitis C.....	43
Hernia, Ventral.....	44
Hospitals.....	44
Hydrocarbons, Chlorinated .....	45
Hypoglycemic Agents .....	45
Hypospadias .....	45
Hysterectomy.....	46
Indomethacin .....	46
Iron.....	47
Ischemic Preconditioning, Myocardial .....	47
Ketamine .....	47
Kidney Neoplasms.....	48
Knee .....	48
Lamiaceae .....	49
Laser Therapy, Low-Level.....	49
Leprosy.....	49
Leukemia, Lymphocytic, Chronic, B-Cell.....	50
Leukoplakia, Oral.....	51
Liver Cirrhosis.....	51
Lunch.....	51
Malaria .....	52
Masks .....	52
Mean Platelet Volume.....	52
Mentha piperita .....	53
Mercury.....	53
Metabolic Syndrome X.....	54
Metal Ceramic Alloys.....	54
Metals, Heavy.....	54
Metaproterenol.....	56
Motor Activity .....	56
Mouth Neoplasms.....	56
Multiplex Polymerase Chain Reaction.....	57
Munchausen Syndrome by Proxy.....	57
Mycoses .....	57
Myocardial Infarction.....	58
Myocardial Ischemia .....	58
Natriuretic Peptide, Brain.....	58
Neoplasm Proteins.....	59

Neoplasms.....	59
Neuroma, Acoustic.....	59
Nicotine.....	60
Nigella sativa.....	60
Noise.....	61
Non-alcoholic Fatty Liver Disease.....	61
Nutritional Status.....	61
Oryza sativa.....	62
Otomycois.....	62
Overweight.....	63
Pancreatitis.....	63
Papaveraceae.....	64
Papaverine.....	64
Patients.....	64
Peptic Ulcer Perforation.....	65
Perinatal Mortality.....	65
Persea.....	65
Petroleum.....	66
Petroleum Pollution.....	66
Pharmacists.....	66
Phenylethyl Alcohol.....	67
Pheochromocytoma.....	67
Placenta Diseases.....	67
Plant Extracts.....	68
Plants, Medicinal.....	68
Polyarteritis Nodosa.....	68
Polycyclic Hydrocarbons, Aromatic.....	69
Polyneuropathies.....	69
Pre-Eclampsia.....	70
Pregnancy, Ectopic.....	70
Pregnancy, Triplet.....	71
Pressure Ulcer.....	71
Prostate.....	71
Prostatic Hyperplasia.....	72
Pseudoephedrine.....	72
Receptors, N-Methyl-D-Aspartate.....	72
Retinal Detachment.....	73
Sepsis.....	74
Sex Preselection.....	74
Sexual Dysfunctions, Psychological.....	74
Slipped Capital Femoral Epiphyses.....	75
Smoking.....	75
Social Determinants of Health.....	75
Solid Waste.....	76
Somites.....	76
Sophora.....	76
Spermatogonia.....	77
Spermatozoa.....	77
Splenectomy.....	77
Still's Disease, Adult-Onset.....	78
Stroke.....	78

Students, Medical.....	79
Sturge-Weber Syndrome.....	79
Sulfur.....	79
Tamoxifen.....	80
Tannins.....	80
Theophylline.....	81
Thiadiazoles.....	81
Thiazoles.....	81
Thrombasthenia.....	82
Thumb.....	82
Timolol.....	83
Trace Elements.....	83
Tubulin.....	83
Urinary Bladder Neoplasms.....	84
Uterine Prolapse.....	85
Varicocele.....	85
Vascular Endothelial Growth Factor A.....	85
Vascular Endothelial Growth Factor Receptor-2.....	86
Vena Cava, Inferior.....	86
Verapamil.....	86
Vitamin A.....	87
Vitamin E.....	87
Vitamin K 3.....	88
Vitamins.....	88
Waste Disposal Facilities.....	89
Water.....	89
Water Microbiology.....	90
Yoga.....	90
Zinc.....	91
<b>Appendix I: Author Index.....</b>	<b>93</b>
<b>Appendix II: List of EMR Journals Indexed in IMEMR (by country).....</b>	<b>119</b>
<b>Appendix III: List of EMR Journals Indexed in IMEMR (by title).....</b>	<b>139</b>





# IMEMR Current Contents

## Rationale

The Index Medicus for the WHO Eastern Mediterranean Region (IMEMR) has sustained its indexing policy, which has made it a vital current awareness information tool, for technical staff of the Regional Office, health care staff, and medical professionals who are able now to access health literature published in the Region as soon as it is published. A document delivery service to support the Index has also been activated which will enable any user to acquire a copy of any article listed in the Index.

The cumulative version of the Index Medicus is available now on the Internet as part of EMRO web site. A CD-ROM version of the same is also being provided upon request.

## Scope and Coverage

The **IMEMR Current Contents** is issued on a quarterly basis including the most recent articles added to Index Medicus for the Eastern Mediterranean Region (IMEMR) Database<sup>1</sup>.

## Indexing Level

Each article has been indexed and assigned to a "Main Heading", plus added headings according to the Medical Subject Headings (MeSH) list of the National Library of Medicine (NLM). Up to five added headings (including the respective country) have been allowed. Subheadings (or qualifiers) are used in indexing to qualify MeSH headings by pinpointing some specific aspects of the concept represented by the heading, e.g. "LIVER-Drug Effects" indicates that the article is not about the liver in general, but about the effect of drugs on the liver.

## Organization of the IMEMR

### Subject Index

The Index is organized in alphabetical order, according to the Main Subject Headings (MeSH). In most cases one main subject is assigned to each article. Under the main subject, entries are sorted by Subheading in alphabetical order also. Each entry includes the bibliographic information of the article e.g. title of the article, author(s), first author's affiliation, journal title, year (date of publication), volume number, issue number, page numbers, number of references, subject descriptors and geographic descriptors. Abstracts have been added and are searchable on the database on the Internet. (as shown in Figure 1)

### Author Index

The IMEMR includes the author's index, which also indicates the subjects covered by each author. (Appendix I)

### List of EMR Journals by Country

The IMEMR includes an updated list of EMR Journals, which are indexed in the index. The list is sorted in alphabetical order by the country of publication, which also indicates the number of journals in each country. (Appendix II)

### List of EMR Journals by Title

The IMEMR includes an updated list of EMR Journals, which are indexed in the index. The list is sorted in alphabetical order by journal's title, which also indicates the status of indexing for each journal. (Appendix III)

## Computer facilities

The Current Contents has been produced using the UNESCO WINISIS package. Countries or journals publishers interested in a subset of the database may be provided with data sets in WINISIS format upon request.

---

<sup>1</sup> Including the countries of Afghanistan, Bahrain, Djibouti, Egypt, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Libyan Arab Jamahiriya, Morocco, Oman, Pakistan, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syrian Arab Republic, Tunisia, United Arab Emirates, Yemen

## Availability of photocopies

Photocopies of articles cited in IMEMR may be obtained from EMRO Library free of charge upon request.

## Availability on the Internet

This issue, as well as all forthcoming issues, will appear in WHO/EMRO web site on the Internet, as part of the complete edition of the Index. Internet address is <http://www.emro.who.int/information-resources/imemr/imemr.html>

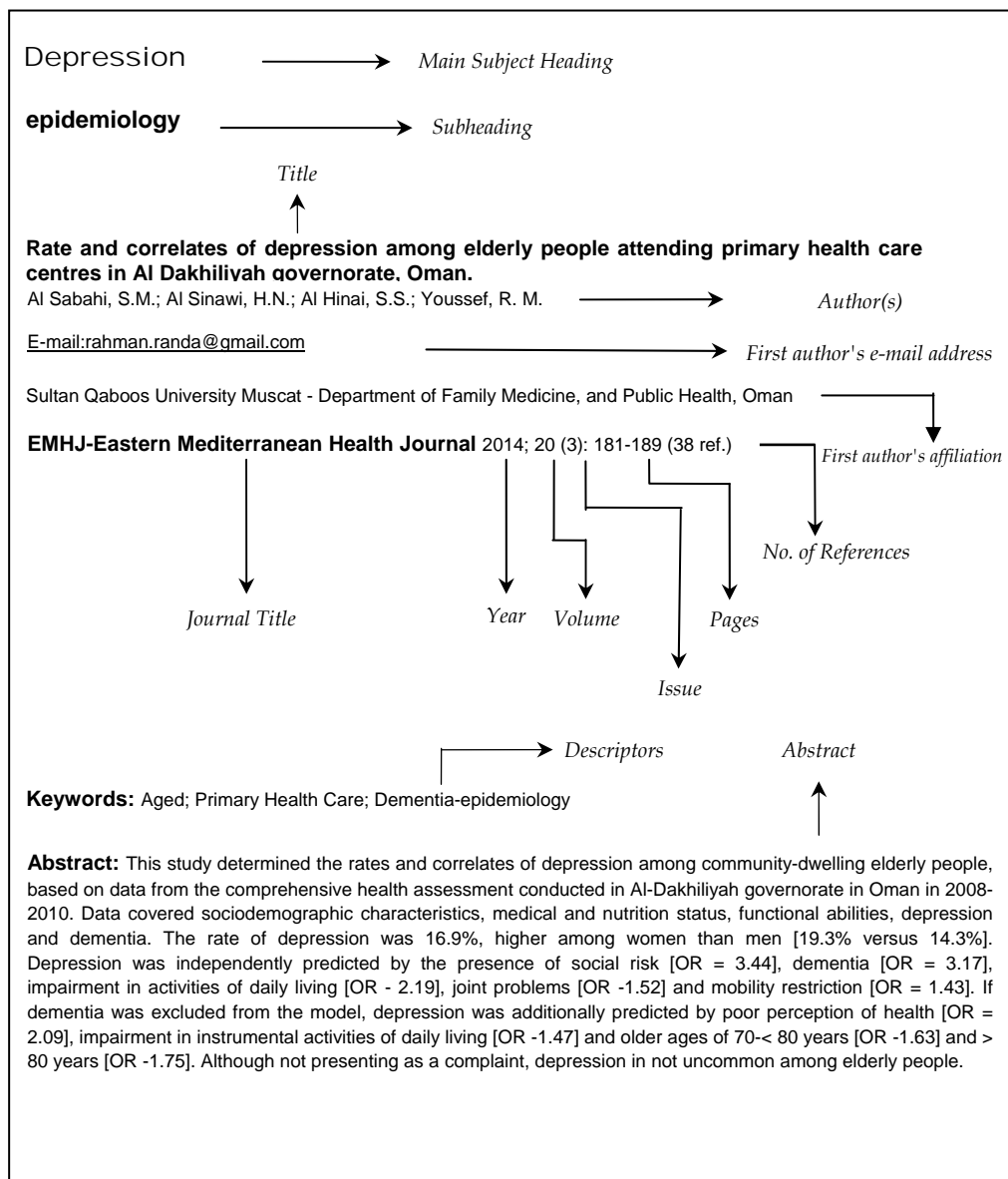


Figure (1): Sample of IMEMR citation

# Subject Index



## Accidents, Traffic

### prevention and control

#### **Strategies for prevention of road traffic injuries [RTIs] in Pakistan: situational analysis.**

Khan, Adeel Ahmed; Fatmi, Zafar

*E-mail: adeel.khan@aku.edu*

The Aga Khan University - Department of Community Health Sciences

**JCPSP-Journal of the College of Physicians and Surgeons Pakistan** 2014; 24 (5): 356-360 (33 ref.)

**Keywords:** Wounds and Injuries; Seat Belts; Head Protective Devices; Motor Vehicles; Environment

**Abstract:** Road traffic injuries [RTIs] are one of the leading causes of death among productive age group. Using systems approach framework [SAP], current preventive strategies for RTI control were reviewed in Pakistan. A review of the literature was done using four international search engines. Only ten studies on preventive strategies for RTI stemming from Pakistan were found. The first Road Traffic Injuries Research Network [RTIRN] surveillance system for road traffic injuries was established in urban city [Karachi] in Pakistan has shown promise for injury control and should be scaled up to other cities. Enforcement of traffic laws on seat-belt and helmet wearing is poor. National Highway and Motorway Police Ordinance [2000] was one of the few legislative measure so far taken in Pakistan. Using SAP, efforts are required to implement interventions targeting human, vehicle design and also making environment safer for road users.

## Adenoma, Pleomorphic

### diagnosis

#### **Chondroid syringoma - a case report.**

Kalsoom, Rahat; Roohi, Mahera; Aziz, Farooq

Shalamar Medical and Dental College - Department of Pathology

**Biomedica** 2014; 30 (1): 53-54 (15 ref.)

**Keywords:** Sweat Gland Neoplasms

**Abstract:** Chondroid syringoma or mixed tumour of the skin is an uncommon benign sweat gland tumour. It is the cutaneous counterpart of pleomorphic adenoma of the salivary glands. The clinical presentation of con-odroid syringoma is non-specific and its histological diagnosis can prove difficult. We report a case of chondroid syringoma arising from a swelling on face in a 40 year old male. The diagnosis was made on histopathological examination. Surgical tumour excision remains the best therapeutic option to avoid relapse of this tumour. Close follow-up is recommended because malignant transformation, although rare, is possible.

## Adrenergic beta-Antagonists

#### **Chiral recognition mechanisms of four beta-blockers by HPLC with amylose chiral stationary phase.**

Wang, Dongmei; Li, Fang; Jiang, Zhen; Yu, Li; Guo, Xingjie

Shenyang Pharmaceutical University - School of Pharmacy

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 449-457 (27 ref.)

**Keywords:** Chromatography, High Pressure Liquid; Metoprolol; Bisoprolol; Propranolol; Atenolol; Amylose-analogs and derivatives; Phenylcarbammates; Diethylamines

**Abstract:** The high performance liquid chromatography [HPLC] enantioseparation of four p-blocking agents metoprolol, bisoprolol, propranolol and atenolol was performed on amylose tris-[3,5-dimethylphenylcarbamate] chiral stationary phase using n-hexane-ethanol-diethylamine [DBA] as the mobile phase and related chiral recognition mechanisms were discussed. Enantiomeric separation of the four beta-blockers was a result of more than one type of interaction between solutes and CSP. Besides hydrogen bonding, there was another type interaction that was independent of solvent polarity and responsible for enantiomeric selectivity, such as interactions. Both the groups close to the chiral centers and the substituent groups on the phenyl rings, which were far away from the chiral centers, could contribute to the good separation. The separations of the four p-blocker enantiomers were all enthalpy driven process. In the range of 293-308K [20-35 °C], as the temperature increased, the retention as well as the resolution decreased. The molecular size rather than concentration of the alcohol modifiers affected the resolution and retention.

## Alcoholism

### prevention and control

#### **Development of country-wide strategies to reduce the alcohol abuse.**

Nikfarjam, Ali; Memaryan, Nadereh; Damari, Behzad; Zamani, Nasim; Hassanian Moghaddam, Hossein  
Tehran University of Medical Sciences - Department of Community Medicine

**IJPM-International Journal of Preventive Medicine** 2014; 5 (4): 522-526 (22 ref.)

**Keywords:** Primary Prevention; Alcohols

**Abstract:** Evidence shows that in Iran alcohol abuse rate may be of concern, especially among the youth. The mental and social health and addiction Department of the Ministry of Health and Medical Education has designed a plan to prevent, treat, and rehabilitate the patients abusing alcohol in a time period of 2011-2015. In a 6-month period, three guiding committees of experts in the field of alcohol abuse reviewed the literature. The meetings of the steering committee were held in order to collect the comments of the policy-makers in recognition of the problem, orientation, and administration procedures for the suggested strategies. The first input was discussed in the committee meeting. In the orientation phase, intervention strategies were suggested whose base was the evaluation of the previous international guidelines. In the final phase, the suggested strategies and challenges and their possible solutions were criticized. Finally, using these strategies, appropriate interventions were defined. Preventing alcohol supply, school- and community-based prevention efforts, monitoring and vigilance were defined as primary prevention. While secondary and tertiary prevention are defined to be the treating and rehabilitating services for the alcohol abusers. We hope by using this strategy we will be able to control alcohol abuse in our country. The first step to reach this aim is done by breaking the taboo of giving alcohol-related information and news using media and educational programs especially to the young population.

## Alismataceae

#### **The rationality of the hypolipidemic effect of Alismatis rhizoma decoction, a classical chinese medicine formula in high-fat diet-induced hyperlipidemic mice.**

Song, Chengwu; Huang, Xiaofei; Lu, Kungang; Peng, Min; Yu, Shangong; Fang, Nianbai

Ministry of Education - Key Laboratory of Chinese Medicine Resource and Compound Prescription [Hubei University of Chinese Medicine]

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 641-649 (29 ref.)

**Keywords:** Hypolipidemic Agents; Drugs, Chinese Herbal; Diet, High-Fat; Hyperlipidemias; Mice

**Abstract:** Alismatis Rhizoma Decoction [ARD] is a classical Traditional Chinese Medicine [TCM] formula for treatment of vertigo with its long history of successful clinical effect. Since vertigo is a symptom of hyperlipidemia, this study aimed at evaluating the hypolipidemic effect of ARD in hyperlipidemic mice induced by high fat diet [HFD] and investigated the rationality of formula combination of Alismatis Rhizoma [AR] and *Attractylodes Macrocephalae* Rhizoma [AMR]. Compared with control group, hyperlipidemic mice in AR and ARD groups displayed a reduction of the following parameters: body weight, liver and serum total cholesterol, triglyceride concentration, liver and spleen coefficients, activities of serum aspartate aminotransferase [AST] and alanine aminotransferase [ALT]; whereas the serum HDL-cholesterol levels were significantly elevated in both AR and ARD groups. AR and ARD treatments significantly down regulated the expressions of 3-hydroxy-3-methylglutaryl-coenzyme A reductase [HMG-CoA reductase] and sterol regulatory element binding factor-2 [SREBF-2]. These findings clearly provided evidences that the suppression on biosynthesis of cholesterol in liver may in part contribute to the hypolipidemic effects of ARD and AR. Since no significantly hypolipidemic effect of AMR was observed, the more prominent effect of ARD than that of AR indicated synergistic effects of AR and AMR, and confirmed the rationality of ARD formula.

## Alveolar Bone Loss

### diagnosis

#### **Severe alveolar bone loss around the mandibular incisor teeth as a long-term effect of tongue-piercing.**

Correa, Fernanda Oliveira Bello; Kruger, Marta Silveira da Mota; Silveira, Felipe Martins; Martins, Thiago Marchi; Ahmed, Hameeda Bashir; Javed, Fawad

Federal University of Pelotas - School of Dentistry - Department of Semiology and Clinic Social

**JCPSP-Journal of the College of Physicians and Surgeons Pakistan** 2014; 24 (5): 375-376 (4 ref.)

**Keywords:** Body Piercing-adverse effects; Mandibular Diseases; Mandible; Incisor; Time

## Amputation

### **Predictive value of soluble CD14 ,interleukin-6 and procalcitonin for lower extremity amputation in people with diabetes with foot ulcers: a pilot study.**

Karakas, Ahmet; Arslan, Erol; Cakmak, Tolga; Aydin, Ibrahim; Akgul, E.Ozgun; Demirbas, Seref; Yildiz, Senol

[E-mail:akarakas@gata.edu.tr](mailto:akarakas@gata.edu.tr)

Gulhane Military Medical Academy and School of Medicine - Department of Infectious Disease and Clinical Microbiology

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 578-582 (25 ref.)

**Keywords:** Antigens, CD14-diagnostic use; Interleukin-6-diagnostic use; Calcitonin; Protein Precursors; Diabetic Foot; Lower Extremity; Pilot Projects

**Abstract:** The aim of this pilot study was to determine clinical and laboratory factors that predict amputation surgery and to evaluate the predictive value of soluble CD14 [sCD14], interleukin-6 [IL-6], and procalcitonin [PCT] in patients with diabetic foot ulcers [DFUs]. Twenty-seven [20 males, 7 females] Diabetic Foot Ulcers [DFU] patients admitted to our department were consecutively enrolled. The patients' demographics and wound characteristics were noted. IL-6, PCT, and sCD14 were measured at admission. Six of the 27 patients [22%] eventually underwent lower extremity amputation. Compared to the non-amputation group, a previous history of amputation [ $p=0.017$ ], the presence of gangrene [ $p=0.044$ ], the Wagner grade [ $p=0.011$ ], the IL-6 concentration [ $p=0.018$ ], the white blood cell count [WBC] [ $p=0.036$ ], and the erythrocyte sedimentation rate [ESR] [ $p=0.042$ ] were significantly high in the amputation group. However, the sCD14 and PCT concentration were not significantly different. We have shown for the first time that IL-6 may have predictive value for lower extremity amputation in patients with DFU. Further studies are needed to confirm its predictive value in this patient group.

## Anemia, Sickle Cell

### **Clinical expression of homozygous sickle cell gene in Yemeni children.**

Nasher, Saeed Thabet; Kasem, Abdul Ghafoor; El Nihary, Khaled Ameen

[E-mail:saidesco@gmail.com](mailto:saidesco@gmail.com)

Taiz University - Faculty of Medicine - Department of Internal Medicine

**Jordan Medical Journal** 2013; 47 (4): 340-347 (19 ref.)

**Keywords:** Child; Hand-Foot Syndrome; Chromatography, High Pressure Liquid

**Abstract:** In this study the demographic and clinical profile of 105 Yemeni children under 16 years old with sickle cell anemia [SCA] were studied. They were 53 males [50.4%] and 52 females [49.5%], aged between 0.5 and 15 years [mean 7.4ys]. The most serious crisis as vaso-occlusive, hemolytic, sequestration and aplastic crisis were seen in [83.8%], [52.3%], [6.6%] and [5.7%] respectively. The hand-foot syndrome was found in [21%] of all patients and in [51%] of children less than 3 years old. The most serious complication was the respiratory tract infections which was the most frequent in these patients, being encountered in [65.7%]. The rate of hospitalization was of [76%]. Our findings show that SCA has a severe clinical course in Yemenis, resembling that in black Africans and in black Americans.

## Anti-Inflammatory Agents, Non-Steroidal

### pharmacology

### **Antiproliferative activity of selected non-steroidal anti-inflammatory agents: role of iron complexes.**

Abu Dahab, Rana; Khalil, Enam; Khair, Ayman; El Sabawi, Dina; Hamdan, Imad

University of Jordan - Faculty of Pharmacy

**Jordan Journal of Pharmaceutical Sciences** 2014; 7 (1): 49-66 (47 ref.)

**Keywords:** Cell Proliferation-drug effects; Iron; MCF-7 Cells; DNA

**Abstract:** In this work the complexation of five NSAIDs with iron [Fe<sup>3+</sup>] was studied and the role of these iron complexes in reducing the proliferation of cancer cells was investigated. The stoichiometry and the formation constants of the complexes formed with different NSAIDs were calculated using the conductivity method. The metal-drug ratio for all drugs was 1:2 and their formation constant values were between 10<sup>9</sup> to 10<sup>14</sup>. The antiproliferative activity of the NSAIDs in their free and complex form was assessed using MCF-7 cells. After 72 hours incubation with the free drugs, mefenamic acid and diclofenac sodium showed the strongest antiproliferative effects with IC<sub>50</sub> of 70.54 +/- 15.29 microM and 108.38 +/- 11.28 microM, respectively. Indomethacin, naproxen and meloxicam had moderate to no effect at the concentrations tested. A linear correlation, with  $r= 0.876$ , between the formation constants of NSAIDs-Fe<sup>3+</sup> complexes and their cytotoxic effects was observed after 6 hours incubation. The ability of each drug to bind to DNA was examined together with the influence of ferric ions on the binding process. Drug-iron complexes were shown to bind to DNA, though with slightly different ratio. The results suggest that the complexes possess intrinsic cytotoxic effect.



## Antineoplastic Agents

### adverse effects

#### **Adverse drug reactions due to cancer chemotherapy in females.**

Anjum, Fakhshheena; Mallick, Neelam; Shakeel, Sadia; Fakhhar, Faiza; Arif, Qurat ul ain; Anwer, Zonaira

*E-mail: fakhshheena\_a@yahoo.com*

Dow University of Health Sciences - Dow College of Pharmacy

**Jordan Journal of Pharmaceutical Sciences** 2014; 7 (1): 37-48 (42 ref.)

**Keywords:** Drug-Related Side Effects and Adverse Reactions; Neoplasms; Neutropenia; Pancytopenia; Anemia; Alopecia; Nausea; Vomiting; Fatigue; Anorexia; Fever; Chills; Diarrhea

**Abstract:** In this study, occurrence of adverse drug reactions in female patients receiving chemotherapy were analyzed. Various drugs prescribed for cancer patients for compensation of these adverse reactions were also noted. Study was conducted on 83 female cancer patients selected randomly from a recent record of six months in KIRAN [Karachi Institute of Radiology and Nuclear Medicine] hospital, Karachi, Pakistan. Only those cases were selected in which patients received at least three cycles of cancer chemotherapy. The collected reports were analyzed for patients' data, drug details, causality, preventability and severity of adverse effects. Causality was assessed by the World Health Organization [WHO] causality assessment scale. Preventability and severity of ADRs were assessed by Naranjo's Algorithm and modified Hartwig's and Siegel scale. Out of n=83 females, n=55 [66.26%] females were married. Majority belonged to lower socioeconomic class [n=64, 77.10%]. In the 40-49 years age group 30.12% [n=25] adverse drug reactions [ADRs] were seen whereas 26.50% [n=22] ADRs in 50-59 years of age and 25.30% [n=21] ADRs in 30-39 years of age group were observed. The cases observed were of breast cancer [n=52, 62.65%], ovarian cancer [n=14, 16.86%], GI Cancer [n=8, 9.63%], and others that include head and neck cancer [n=3, 3.61%], lymphomas [n=3, 3.61%], sarcomas [n=2, 2.40%] and mass on chest wall [n=1, 1.20%]. In general, the common adverse effects observed were neutropenia/pancytopenia/anemia [n=64, 77.10%], alopecia [n=51, 61.44%], nausea and vomiting [n=39, 46.98%], fatigue/anorexia [n=26, 31.32%], mouth sores [n=21, 25.30%], fever and chills [n=20, 24.09%] and diarrhea [n=12, 14.45%]. According to the three scales employed for ADRs assessment i.e. [WHO] causality assessment scale, Naranjo's Algorithm and modified Hartwig's and Siegel scale for preventability and severity of ADRs, the results are in close agreement with each other with respect to occurrence and severity of the ADRs. A number of ADRs are observed in various cancer patients receiving chemotherapy indicating high need of ADR monitoring and reporting. The problem of under-reporting of ADRs is a big issue and must not be overlooked.

## Antioxidants

#### **Effect of mild chronic hyperbaric pressure on blood antioxidant levels among Jordanian smoker and non-smoker males.**

Karadsheh, Naif S.; Khatib, Faisal A.

*E-mail:nsokh@yahoo.com*

University of Jordan - School of Medicine - Department of Biochemistry and Physiology

**Jordan Medical Journal** 2013; 47 (4): 308-315 (29 ref.)

**Keywords:** Smoking; Hyperbaric Oxygenation; Erythrocytes; Glutathione; Glutathione Peroxidase; Catalase; Atmosphere

**Abstract:** Hyperbaric oxygen treatment and cigarette smoking are known to increase oxidative stress via the production of reactive oxygen species. Jordan, having different altitudes, offers an ideal geographical site to study the effect of mild chronic hyperbaric pressure [mHB], smoking and their combination on the level of antioxidants in humans. The levels of the antioxidants, glutathione in the whole blood and the erythrocyte antioxidant enzymes, were assessed in non-smoker and smoker male subjects living in the Dead Sea area in the Jordan Valley which represents Earth's lowest point on land [423 m below sea level] and compared with male subjects living in the Amman area [766 m above sea level]. It was found that chronic mHB caused a significant increase in the levels of glutathione and glutathione peroxidase [~ 35% to 50%] and catalase [up to 20%] in smokers and non-smokers but resulted in a decrease in glutathione reductase [~ 25%] in both groups. However, smoking habit did not affect the level of antioxidants except for a slight change in a few cases. It is concluded that tolerance to mild chronic hyperbaric atmosphere involved induction of the antioxidants glutathione, glutathione peroxidase and catalase. In addition, the increased level of GSH may provide further protection to peripheral cells from any damage by the resulting mild increase in tissue O<sub>2</sub> concentration in the subjects living under chronic mHB. Meanwhile, our results suggest that smoking appears to have little or no effect on the level of antioxidants in the blood.

## Antipyrene

### analogs and derivatives

#### **Edaravone decreases paraquat toxicity in A549 cells and lung isolated mitochondria.**

Shokrzadeh, Mohammad; Shaki, Fatemeh; Mohammadi, Ebrahim; Rezagholizadeh, Neda; Ebrahimi, Fatemeh  
Mazmdaran University of Medical Sciences - Pharmaceutical Sciences Research Center

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 675-681 (24 ref.)

**Keywords:** Paraquat-toxicity; Mitochondria; Lung; Oxidative Stress; Antioxidants

**Abstract:** Edaravone, an antioxidant and radical scavenger, showed protective effects against oxidative stress-like condition. Paraquat [PQ] is toxic herbicide considerable evidence suggests that oxidative stress and mitochondrial dysfunction contribute to PQ toxicity. In this study, protective effect of edaravone against PQ induced toxicity and reactive oxygen species [ROS] generation in A549 cells and lung isolated mitochondria were evaluated. A549 cells and lung isolated mitochondria were divided into control group, PQ group, edaravone group and PQ plus edaravone-pretreated group. Cellular and mitochondrial viability assayed using MTT test and ROS generations in both cellular and mitochondrial fraction were determined by fluorometry using DCFH-DA as indicator. Our results showed that edaravone [5-100 microM] prevented PQ [500 microM] induced cytotoxicity in A549 cells that the best protective effect was observed at concentration of 50 microM of edaravone. In addition, PQ-induced ROS generation in A549 cells significantly inhibited by edaravone. Moreover, PQ decreased mitochondria viability and also increased ROS generation in lung isolated mitochondria that edaravone [25-400 microM] markedly inhibited these toxic effects. In overall, the results of this study suggest that lung mitochondria maintenance is essential for maintaining PQ cytotoxicity and Edaravone is a protective drug against PQ toxicity in-vitro.

## Artemisia

### chemistry

#### **Total phenolic contents and antioxidant activities of different extracts and fractions from the aerial parts of Artemisia biennis willd.**

Hatami, Tayyeb; Emami, Sayyed Ahmad; Miraghaee, Sayyed Shahram; Mojarrab, Mahdi  
Kermanshah University of Medical Sciences - School of Pharmacy - Novel Drug Delivery Research Center

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 551-558 (47 ref.)

**Keywords:** Phenols; Antioxidants; Plant Extracts; Plant Components, Aerial

**Abstract:** Total phenolic contents [TPC] of five different extracts [petroleum ether, dichloromethane, ethyl acetate, ethanol and ethanol-water] of *Artemisia biennis* Willd were measured in this work. The antioxidant activity was investigated by three different methods: p-carotene bleaching [BCB] test, 2,2-diphenyl-1-picrylhydrazyl [DPPH] radical scavenging method and ferrous ion chelating [FIC] assay. Among all the extracts analyzed, the hydroethanolic extract exhibited a significantly higher phenolic content and antioxidant activity than other samples. Vacuum liquid chromatography of this extract yielded seven fractions [A to G] which were subjected to all aforementioned experiments. The highest total phenolic content and free radical scavenging activities were present in the same sample [Fraction D] but the only statistically significant correlation between TPC and EC<sub>50</sub> values was observed for BCB.

## Arthroplasty, Replacement, Hip

#### **Long-term performance of exteriorized femoral stem after cortical perforation in revision cemented total hip replacement.**

Shaikh, Aamir H.; Neligan, Maurice

[E-mail:dmamir@mail.com](mailto:dmamir@mail.com)

UPMC Beacon Hospital - Department of Trauma and Orthopaedic Surgery

**JCPSP-Journal of the College of Physicians and Surgeons Pakistan** 2014; 24 (5): 369-370 (7 ref.)

**Keywords:** Bone Cements; Femur

**Abstract:** This is the first published report of a long-term, fourteen years close annual follow-up of a patient who underwent revision total hip replacement with per-operative anterior cortical perforation of femur while undertaking cemented femoral stem insertion. This patient has complete satisfaction in terms of clinical and radiological outcome. This patient has been walking full weight bearing on her operated leg after 3 months of her surgery. We advocate for the need of paying meticulous attention to observe this complication on operative table and to proceed with controlled stem insertion where doubt exist. Such patients may require a vigilant regular annual follow-up to observe their clinical and radiological status and an expectant approach may be adopted unless patient becomes symptomatic.

## Ascorbic Acid

### analysis

#### **A highly sensitive kinetic spectrophotometric method for the determination of ascorbic acid in pharmaceutical samples.**

Shishehbore, Masoud Reza; Aghamiri, Zahra

*E-mail:shishehbor47@iauyazd.ac.ir*

Islamic Aiad University - Department of Chemistry

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 373-382 (41 ref.)

**Keywords:** Spectrophotometry; Pharmaceutical Preparations

**Abstract:** In this study, a new reaction system for quantitative determination of ascorbic acid was introduced. The developed method is based on inhibitory effect of ascorbic acid on the Orange G-bromate system. The change in absorbance was followed spectrophotometrically at 478 nm. The dependence of sensitivity on the reaction variables including reagents concentration, temperature and time was investigated. Under optimum experimental conditions, calibration curve was linear over the range 0.7 - 33.5 microg mL<sup>-1</sup> of ascorbic acid including two linear segments and the relative standard deviations [ $n = 6$ ] for 5.0 and 20.0 microg mL<sup>-1</sup> of ascorbic acid were 1.08 and 1.02%, respectively. The limit of detection was 0.21 microg mL<sup>-1</sup> of ascorbic acid. The effect of diverse species was also investigated. The developed method was successfully applied for the determination of ascorbic acid in pharmaceutical samples. The results were in a good agreement with those of reference method.

## Aspirin

#### **Acetylsalicylic acid resistance in patients with type 2 diabetes mellitus, prediabetes and non-diabetic coronary artery disease.**

Cetin, Mustafa; Kiziltunc, Emrullah; Cetin, Zehra Guven; Cicekcioglu, Hulya; Sahin, Muslum; Isik, Serhat; Kurtul, Alparslan; Ornek, Ender; Ulusoy, Feridun Vasfi

Ankara Numune Education and Research Hospital - Department of Endocrinology and Metabolism

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 539-544 (26 ref.)

**Keywords:** Drug Resistance; Diabetes Mellitus, Type 2; Prediabetic State; Coronary Artery Disease

**Abstract:** Several studies have demonstrated the beneficial role of antiplatelet therapy with acetylsalicylic acid [ASA] at atherosclerotic vascular disease. Antiaggregant effect of ASA is not uniform in all patients. Purpose of the present study is to evaluate the prevalence of ASA resistance in patients with type 2 diabetes mellitus [T2DM], pre-diabetes and non-diabetic coronary artery disease [CAD]. Effect of ASA was assessed using the platelet function analyzer [PFA-100] system. Resistance to ASA was defined as a normal collagen/epinephrine induced closure time after one week of ASA therapy. Patients with non-diabetic CAD, pre-diabetes and T2DM were compared. ASA resistance was found in 26 [37.1%], 6 [17.6%] and 41 [26.5%] patients in the groups, respectively [ $p=0.154$ ]. ASA resistance was found to be significantly higher in men, smokers and insulin users, besides this it was found to be significantly lower in beta blocker [BB] users, angiotensin converting enzyme inhibitor [ACEI] users with univariate analysis. However insulin usage was found to be the single effective parameter on ASA resistance in multivariate analysis. There was no difference with regard to ASA resistance between groups. While ASA resistance was higher in men, smokers and insulin users, it was lower in patients using BBs and ACEIs.

## Asthma

### genetics

#### **Development of a high-resolution melting analysis method based on SYBR green-I for rs7216389 locus genotyping in asthmatic child patients.**

Vali, Zahra; Raz, Abbasali; Bokharaei, Hanieh; Nabavi, Mohammad; Bemanian, Mohammad Hassan; Yazdi, Mina Sharifi; Djadid, Navid Dinparast

Pasteur Institute of Iran - Biotechnology Research Center - Malaria and Vector Research Group [MVRG]

**AJMB-Avicenna Journal of Medical Biotechnology** 2014; 6 (2): 72-80 (27 ref.)

**Keywords:** Genotyping Techniques; Child; Organic Chemicals; Fluorescent Dyes; Genetic Loci; Polymerase Chain Reaction; Polymorphism, Restriction Fragment Length

**Abstract:** Asthma is caused by the combination of different factors. Current concepts of asthma pathogenesis emphasize on gene-environment interactions. Mega-genome scanning projects revealed that different Single Nucleotide Polymorphisms [SNPs] are related to asthma susceptibility. rs7216389-T is one of them that is related to childhood asthma and its effect on childhood asthma severity has been proved in different nations, however no study has been performed in Eastern Mediterranean and Middle East countries yet. To perform population genetic studies, a

rapid and high-throughput screening method is necessary. High-resolution melting analysis is a rapid, powerful and accurate method, which is suitable for this type of studies. Therefore, it has been decided to develop a high-resolution melting method for rs7216389 locus genotyping in Iranian asthmatic children. In the current study, a high-resolution melting analysis method based on SYBR Green-I was developed to check the frequency of rs7216389-T mutation in Iranian asthmatic children for the first time. Second and third classes of intercalating dyes are commonly used for high-resolution melting method. However, in this study, SYBR Green-I was used for rs7216389 locus genotyping for the first time. Our results for 60 samples showed that SYBR Green-I has good efficacy for rs7216389 locus genotyping through high-resolution melting method in comparison with PCR-RFLP and sequencing. Comparison of our results based on HRM analysis with PCR-RFLP showed that our developed method is rapid, accurate, high-throughput and economic to study the rs7216389 locus in asthmatic children and it is applicable for other similar population genetic studies.

## Atrial Fibrillation

### Relationship between atrial fibrillation and coronary bypass surgery.

Ozcan, Sedat

[E-mail:sedatozcan78@hotmail.com](mailto:sedatozcan78@hotmail.com)

Canakkale Onsekiz Mart University - Faculty of Medicine - Department of Cardiovascular Surgery

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 630-633 (16 ref.)

**Keywords:** Coronary Artery Bypass

**Abstract:** Atrial fibrillation [AF] is the most common arrhythmia seen after coronary artery surgery. The purpose this study was to determine incidence of AF that develops after coronary surgery and the factors affecting its development. Four hundred and forty eight patients who had coronary bypass surgery between February 2007 and September 2011 in the Cardiovascular Surgery Clinic were included in the study. Patients with history of chronic renal failure, redo coronary bypass surgery, valvular disease, thyroid disease, ventricular aneurysm and treatment with beta-blockers were excluded from the study of EF. Two hundred and ninety nine patients were male and 149 were female and their age varied between 38 and 85 and their mean age was 61 +/- 5. Surgery was performed on beating heart on 178 patients and the others were operated with cardiopulmonary bypass [CPB]. Advanced age, male sex and history of hypertension was more in AF developed patient group. There was no difference between AF developed group and the other group in terms of diameter of left atrium, ejection fraction [EF], CPB time and cross clamp time. Advanced age, male sex, hypertension and prolonged P-wave duration are the factors that are associated with AF after coronary surgery. Avoidance of CPB does not decrease AF development.

## Automobile Driving

### Screening for common occupational health diseases among long distance professional drivers in Sagamu, Ogun State, Nigeria.

Amoran, Olorunfemi Emmanuel; Salako, Albert Adekunle; Jemiusi, Olubunmi

[E-mail:drfamoran@yahoo.com](mailto:drfamoran@yahoo.com)

Olabisi Onabanjo University Teaching Hospital - Department of Community Medicine and Primary Care

**IJPM-International Journal of Preventive Medicine** 2014; 5 (4): 516-521 (37 ref.)

**Keywords:** Occupational Diseases; Occupational Health; Cross-Sectional Studies; Questionnaires; Mass Screening

**Abstract:** Long term exposure to hazards at the work place is injurious to health and usually leads to diseased conditions. The objective of this study was to determine the occupational health problems associated with driving among the professional drivers in Sagamu, Ogun state, Nigeria. This study is a cross-sectional study. Total sample of all the consenting professional drivers in the five interstate motor parks, including the cement factory [WAPCO] in the local government area, were recruited into the study. An interviewer administered structured questionnaire was administered by trained health workers and respondents were screen for common occupational health problems. A total of 400 professional drivers were interviewed, all [100%] of them were males with age range from 21 to 59 yrs and nearly half [42%] were non indigenes. Only half, 208 [52%] of them were married with majority, 232 [58.0%] working for about 12 hrs daily and 46% of them had been working for 5 yrs or more. Most, 382 [95.5%] had been educated on HIV/AIDS before and 313 [78.3%] of them had multiple sexual partners. Only 241 [60.3%] used condom at the last sexual act and 55 [13.5%] had ever been tested for HIV/AIDS. Common occupational health diseases were renal tubular acidosis [RTA] 52 [13%] in the last one year and most of them currently have myalgia 352 [88.0%], upper respiratory tract infections [URTI] 20 [5.0%], sexually transmitted diseases [STD] 15 [3.8%], short sightedness 41 [10.3%], and Hypertension 90 [22.5%]. The study shows that common occupational diseases among long distance professional drivers in Western Nigeria were myalgia, upper respiratory tract infection, hypertension, short sightedness, sexually transmitted diseases, and RTA. Prevention and control of these common diseases among the drivers will lead to reduction of road traffic accidents in Western Nigeria and other low income countries.

## Behcet Syndrome

### blood

#### Haemostatic parameters in patients with Behçet's disease.

Alkaabi, Juma K.; Gravell, David; Al Haddabi, Hamood; Pathare, Anil

*E-mail: jkalkaabi@hotmail.com*

Sultan Qaboos University Hospital - Rheumatology Unit - Department of Medicine and Department of Haematology

**SQUMJ-Sultan Qaboos University Medical Journal** 2014; 14 (2): 176-182 (26 ref.)

**Keywords:** Hemostatics; Thrombosis; Retrospective Studies; Cross-Sectional Studies; Blood Coagulation Factors

**Abstract:** This study aimed to evaluate the cause of thrombosis in Behçet's disease [BD] patients, since abnormalities in coagulation and fibrinolytic parameters have shown contradictory results. Haemostatic parameters were retrospectively evaluated in BD patients treated between January 2007 and January 2011 at Sultan Qaboos University Hospital, Oman. The blood samples of 35 Omani BD patients and 30 healthy controls were analysed for factor VIII:C levels, activated protein C resistance [APCR], von Willebrand factor [vWF] antigens [Ag], collagen binding and ristocetin co-factor activity [RiCoF], antithrombin [AT] protein C [chromogenic and clotting], protein S, homocysteine, tissue plasminogen activator, plasminogen activator inhibitor, plasminogen, alpha 2-antiplasmin, lupus anticoagulant and anticardiolipin and beta2-glycoprotein-I antibodies. The mean values of factor VIII:C, vWF Ag, AT and protein S were significantly higher in the patient group [P = 0.01, 0.006, 0.04 and 0.01, respectively]. There was no deficiency in protein C. Screening for APCR, anticardiolipin antibodies, anti-beta2-glycoprotein-I antibodies and lupus anticoagulant was negative and there were no differences in homocysteine levels, nor were there differences between patients with and without thrombosis. Six patients had elevated factor VIII:C levels [ $>150$  IU/dL, P  $<0.02$ ] which normalised on repeat measurements after three months. The elevation of factors VIII:C, vWF Ag and AT most likely represent an acute phase phenomenon. In this study, thrombophilic factors did not seem to explain thrombotic tendency. Therefore, further mechanistic studies in a larger group of patients are needed to elucidate the basis for thrombosis in BD. We hypothesise that active BD causes vasculitic endothelial perturbation with dysfunction, leading to the observed increased propensity for thrombosis.

## beta-Thalassemia

#### Frequency of red cell alloantibodies and autoantibodies in thalassemia major children.

Iqbal, Iram; Ahmed, Nisar

Lahore General Hospital and PGMI - Department of Pathology

**Biomedica** 2014; 30 (1): 25-28 (18 ref.)

**Keywords:** Isoantibodies; Autoantibodies; Erythrocytes; Child; Blood Transfusion; Cross-Sectional Studies

**Abstract:** Beta Thalassemia is an inherited haemoglobin disorder characterized by reduced synthesis of beta - globin chains [1]. The most severe forms of  $\beta$ -thalassemia major present within the first year of life with severe anaemia and failure to thrive. [2]The haemoglobinopathies are major genetic problems in Pakistan. The purpose of this study was to determine the frequency of red cell alloantibodies and auto-antibodies in thalassemia major children receiving regular blood transfusions. It was a cross sectional survey. It was performed at The Children Hospital and Institute of Child Health, Lahore in Dec. 2009 - May 2010. 130 diagnosed patients of beta thalassaemia major from Children Hospital Lahore were selected. Blood grouping and direct antiglobulin test was performed in these patients. Allo-antibody screening and identification tests were done using the 3 cell panel followed by 11 cell panel of Diamed. Among the 130 patients 8.5% [n = 11] patients were diagnosed to have alloantibodies. Autoantibodies were detected in 2.3% [n = 3]. Presence of red cell antibodies and red cell autoantibodies are frequent findings in transfused thalassaemic patients and should not be overlooked in patients with thalassaemia major receiving regular blood transfusion. Regular screening for red cell alloantibodies and autoantibodies would add towards the better management of these patients.

## Bioelectric Energy Sources

#### Application of nano-electrode platinum [Pt] and nano-wire titanium [Ti] for increasing electrical energy generation in microbial fuel cells of synthetic wastewater with carbon source [acetate]

Torabiyani, A.; Bidhendi, Gh. R Nabi; Mehrdadi, N.; Javadi, Kh.

University of Tehran - Graduate Faculty of Environment - Department of Environmental Engineering

**International Journal of Environmental Research** 2014; 8 (2): 453-460 (18 ref.)

**Keywords:** Waste Water; Carbon; Electrodes; Platinum; Nanowires; Titanium; Acetates; Carbon; Electrodes

**Abstract:** The microbial fuel cells [MFCs] are a kind of systems through which the anaerobic bacteria along with the oxidation of simple or complicated organic matter in the wastewater can generate the electric power. This is a modern approach used in generation of the clean and renewable energy. In this research, two pilot laboratories of double-chamber microbial fuel cells were made. One of them contained platinum electrode and simple nano-wire Titanium and the other had nano-electrode Platinum and nano-wire with equal volume of 1 liter. They were launched in 4 Hydraulic

Retention Time [2.5, 3.5, 4.5 and 5.5 hrs.] and increased in 4 steps of organic loading rate with synthetic wastewater with carbon source [acetate] and temperature [20 +/- 5°C]. The voltage and electric current was measured by means of digital multimeter. The performance of the two reactors in generation of electricity was investigated based on the polarization curve. Maximum voltage and current output were, respectively, 1425 mV and 13.1 mA, and the maximum power density and current density were, respectively 78 mW/nr and 67.3 mA/m<sup>2</sup> and columbic efficiency were achieved in 34.6% in reactor with nano-electrode Platinum and nano-wire Titanium (in HRT 4.5 hr and external resistance was 10[KΩ]). In addition, the maximum removal rate of COD in organic loading rate 3.99 Kg COD/m day is equal to 98.28% for nano-electric and nano-wire and 72.5% for simple electrode and wire.

## Biofuels

### **Anaerobic digestion of slaughterhouse solid waste for the optimization of biogas production.**

Medina Herrera, M.; Rodriguez Garcia, A.; Montoya Herrera, L.; Cardenas Mijangos, J.; Godinez-MoraTovar, L.A.; Bustos Bustos, E.; Rodriguez Valadez, F.J.; Manriquez Rocha, J.  
Environmental Electrochemistry

**International Journal of Environmental Research** 2014; 8 (2): 483-492 (33 ref.)

**Keywords:** Abattoirs; Solid Waste

**Abstract:** Anaerobic digestion is a feasible technology to stabilize the solid waste generated in slaughterhouses obtaining significant quantities of biogas, considered as a clean and renewable fuel. This is why it is important to optimize the digestion process in order to eliminate organic matter and maximize the production of biogas. In this work, a system was developed for treating slaughterhouse solid waste while maximizing the production of biogas. This system is based on the separation of the acidogenic and the methanogenic phases of anaerobic digestion. The study was conducted in two phases. First, the effect of thermal pretreatment of the substrate and inoculation of the bioreactor with granular sludge were evaluated. In this phase, two variables were analyzed: the pretreatment temperature and whether or not inoculum was added. The results showed that the greatest decrease of total chemical oxygen demand [57%] and the highest biogas production [753 mL] were obtained from the inoculated sample pre-treated at 60 °C. In the second phase of the study, we analyzed the effect of running the anaerobic digestion stages, fermentation and digestion, in two separated steps. We found that the removal of organic matter is the same [56%] but more biogas [0.376 m<sup>3</sup>m<sup>3</sup> reactor day] was produced in a two-step process.

## Biomedical Technology

### **Emerging 21<sup>st</sup> century medical technologies.**

Bajwa, Mohammad

*E-mail: mibajwa@hotmail.com*

Metropolitan College of New York - Health care Systems Management

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 649-655 (10 ref.)

**Keywords:** Electronic Health Records; Medical Records; Radio Frequency Identification Device; Geographic Information Systems; Telemedicine; Cell Phones; Microcomputers; Nanomedicine

**Abstract:** Although several medical technologies have been around since decades and are in the continuous process of development, some latest technologies are changing the way medicine would be practiced in the future. These technologies would allow medical practice from anywhere, any time and from any device. These include smart phones, Tablet PCs, Touch screens, digital ink, voice recognition, Electronic Health Records [EHRs], Health Information Exchange [HIE], Nationwide Health Information Network [NwHIN], Personal Health Records [PHRs], patient portals, Nanomedicine, genome-based personalized medicine, Geographical Positioning System [GPS], Radiofrequency Identification [RFID], Telemedicine, clinical decision support [CDS], mobile home healthcare, cloud computing, and social media, to name a few significant.

## Biomphalaria

### **drug effects**

### **Molluscicidal activity of the methanol extract of Callistemon viminalis [sol. ex gaertner] g.don ex London fruits, bark and leaves against Biomphalaria alexandrina snails.**

Gohar, Ahmed A.; Maatoq, Galal T.; Gadara, Sahar R.; Aboelmaaty, Walaa S.; El Shazly, Atef M.

*E-mail: ahmedqohar99@yahoo.com*

Mansoura University - Faculty of Pharmacy - Pharmacognosy Department

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 505-514 (41 ref.)

**Keywords:** Snails; Molluscicides; Methanol; Fruit; Plant Bark; Plant Leaves

**Abstract:** Methanol extracts of *Callistemon viminalis* [Sol. Ex Gaertner] G.Don Ex Loudon fruits, bark and leaves were tested for molluscicidal activity. Snails were collected and kept in dechlorinated water under standard condition. Ten adults *Biomphalaria alexandrina*, of the same size, were introduced in plastic aquaria for each experiment. The fruits, barks and leaves were extracted with methanol and the methanol extracts were kept for testing as molluscicides. Different extracts proved to have molluscicidal activity against the vector of schistosomiasis, *B. alexandrina* snails. LC50 values for *C. viminalis* fruits, bark and leaves were 6.2, 32 and 40 ppm respectively. The *C. viminalis* fruits extract showed the highest effect against the tested snails. Histopathological studies proved that the site of action of all tested extracts was localized in the digestive system and hermaphrodite gland.

## Blood Glucose

### **Impaired fasting glucose in Omani adults with no family history of type 2 diabetes.**

Al Sinani ,Sawsan; Al Shafae, Mohammed; Al Mamari, Ali; Woodhouse, Nicolas; El Shafie, Omayma; Hassan, Mohammed O.; Al Yahyaee, Said; Albarwani, Sulayma; Jaju, Deepali; Al Hashmi, Khamis; Al Abri, Mohammed; Rizvi, Syed; Bayoumi, Riad

*E-mail:sawsan.alsinani@gmail.com*

Sultan Qaboos University Hospital - Departments of Biochemistry

**SQUMJ-Sultan Qaboos University Medical Journal** 2014; 14 (2): 169-175 (38 ref.)

**Keywords:** Fasting; Prevalence; Adult; Diabetes Mellitus, Type 2; Obesity; Cross-Sectional Studies

**Abstract:** The aim of this study was to estimate the prevalence of impaired fasting glucose [IFG] among Omani adults with no family history [FH] of diabetes and to investigate the factors behind the risk of developing type 2 diabetes [T2D], while excluding a FH of diabetes. A total of 1,182 Omani adults, aged >40 years, visited the Family Medicine and Community Health Clinic at Sultan Qaboos University Hospital, Oman, on days other than the Diabetes Clinic days, from July 2010 to July 2011. The subjects were interviewed and asked if they had T2D or a FH of T2D. Only 191 [16%] reported no personal history of T2D or FH of the disease. Of these, anthropometric and biochemical data was complete in 159 subjects. Of these a total of 42 [26%] had IFG according to the American Diabetes Association criteria. Body mass index, fasting insulin, haemoglobin A[1c] and blood pressure [BP], were significantly higher among individuals with IFG [P <0.01, P <0.05, P <0.01 and P <0.01, respectively]. In addition, fasting insulin, BP and serum lipid profile were correlated with obesity indices [P <0.05]. Obesity indices were strongly associated with the risk of IFG among Omanis, with waist circumference being the strongest predictor. Despite claiming no FH of diabetes, a large number of Omani adults in this study had a high risk of developing diabetes. This is possibly due to environmental factors and endogamy. The high prevalence of obesity combined with genetically susceptible individuals is a warning that diabetes could be a future epidemic in Oman.

## Bone Diseases, Metabolic

### diet therapy

### **Imbalanced diet deficient in calcium and vitamin D- induced juvenile osteopenia in rats; the potential therapeutic effect of Egyptian moghat roots water extract [Glossostemon bruguierii]**

Ghareeb, Doaa A.; El Rashidy, Fatma H.; El Mallawany, Sherif

Alexandria University - Faculty of Science - Department of Biochemistry

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 623-634 (44 ref.)

**Keywords:** Calcium-deficiency; Calcium, Dietary; Vitamin D Deficiency; Vitamin D; Diet; Sterculiaceae; Rats, Sprague-Dawley; Parathyroid Hormone-blood; Estrogens-blood; Plant Roots; Plant Extracts

**Abstract:** This study aimed to explore and validate a new juvenile osteopenic [JO] rat model then examine the efficacy of moghat [*Glossostemon bruguierii*] as an alternative reversal therapy for JO. Phytochemical screening analysis showed that moghat contains 5.8% alkaloids, 1.5% flavonoids and 13.2% total phenols. Juvenile osteopenia was induced in 15 days old Sprague-Dawley female rats by feeding them free Ca and vitamin D synthetic diet for 21 days. Osteopenic rats were either treated with moghat [0.8 g dried plant tissue/Kg body weight, orally], or with a reference nutritional supplements of calcium chloride [14 mg Ca/Kg] and vitamin D3 [7 IU/ Kg], for extra 21 days. Both untreated and treated groups were compared to a control group that fed a regular pelleted food. Our results showed that osteopenic rats lost normal bone tissue architecture. 30% of body mass, 54% of bone mass and finally 93% of bone calcium mass. Furthermore, these rats showed a markedly increase in serum phosphate, PTH, alkaline phosphatase, aspartate transaminase activities and creatinine level as compared to the control group. Moghat administration was successfully reversed osteopenia by normalizing body and bone masses to the reference ranges, increased the bone calcium mass by 17 fold without any detectable side effects on liver and kidney physiological performance. Therefore, moghat could be considered as potent safe -JO- reversal extract.

## Boswellia

### Effect of boswellia thurifera gum methanol extract on cytotoxicity and P53 gene expression in human breast cancer cell line.

Yazdanpanahi, Nasrin; Behbahani, Mandana; Yektaeian, Afsaneh

[E-mail:n.yazdanpanahi@gmail.com](mailto:n.yazdanpanahi@gmail.com)

Islamic Aiad University - Falavarjan Branch - Department of Biochemistry

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 719-724 (23 ref.)

**Keywords:** Plant Gums; Methanol; Plant Extracts; Cytotoxins; Genes, p53; Gene Expression; Breast Neoplasms; Cell Line, Tumor; Real-Time Polymerase Chain Reaction; Tetrazolium Salts; Thiazoles

**Abstract:** Boswellia has been widely used in traditional medicine for the treatment of different diseases such as cancer in Iran. The aim of this study was to evaluate the effect of the gum methanol extract of Boswellia thurifera on the viability and P53 gene expression of cultured breast cancer cells. The gum methanol extract was obtained in various concentrations using the maceration method. Normal [HEK-293] and cancer [MDA-MB-231] human cells were cultured and treated with various concentrations of the extract. Then MTT assay was used for the study of cytotoxic effect of the extract and real time PCR method was also applied for the investigation of P53 gene expression in cancer cells. The IC<sub>50</sub> of the extract against cancer cells was 80 microg/mL and had less cytotoxic effect in normal cells. The effect of the extract was dose dependent. Induction of P53 expression by extract was also significantly more in treated cancer cells than untreated cells. This inductive effect in cells was higher after 12 h treatment than it was after 6 h. The results of the current study show that gum methanol extract of Boswellia thurifera has probably anti-cancer effects and could induce P53 gene transcription and toxicity in the cultured breast cancer cell line. The increase of P53 gene specific mRNA may be a mechanism of gum methanol extract induced Cytotoxicity. However, for a definitive conclusion, further studies on other cell lines as well as animal models and subsequent clinical studies are warranted.

## Branchio-Oto-Renal Syndrome

### diagnosis

#### Branchio-oto-renal syndrome.

Jalil, Jawad; Basheer, Faisal; Shafique, Mobeen

[E-mail:jawadjalil2002@hotmail.com](mailto:E-mail:jawadjalil2002@hotmail.com)

Combined Military Hospital - Department of Paediatric

**JCPSP-Journal of the College of Physicians and Surgeons Pakistan** 2014; 24 (5): 367-368 (11 ref.)

**Keywords:** Deafness; Ear Diseases; Kidney Diseases; Branchial Region; Fistula; Kidney-abnormalities

**Abstract:** The association of branchial arch anomalies [branchial cysts, branchial fistulas], hearing loss and renal anomalies constitutes the branchio-oto-renal [BOR] syndrome also known as Melnick Fraser syndrome. We present a case of this rare disorder in a girl child who presented with profound deafness, preauricular pits, branchial sinuses and renal hypoplasia.

## Breast Neoplasms

### epidemiology

#### Epidemiology of breast cancer among Bahraini women data from the Bahrain cancer registry.

Hamadeh, Randah R.; Abulfatih, Najat M.; Fekri, Majeda A.; Al Mehza, Hala E.

Arabian Gulf University - College of Medicine and Medical Sciences - Department of Family and Community Medicine

**SQUMJ-Sultan Qaboos University Medical Journal** 2014; 14 (2): 162-168 (31 ref.)

**Keywords:** Health Policy; Registries; Mass Screening; Incidence; Carcinoma, Ductal, Breast; Survival Rate

**Abstract:** The aim of this study was to describe the epidemiology of breast cancer among the Bahraini female population in the years 2000-2010 and examine its health policy implications. All breast cancer cases in the Bahrain Cancer Registry from 1<sup>st</sup> January 2000 to 31<sup>st</sup> December 2010 were included. There were 1,005 cases, 12.7% of which were detected by screening. The overall mean age at diagnosis was 50.9 years [95% confidence interval 50.1-51.6]. The age-standardised incidence rate declined from 58.2 per 100,000 in 2000 to 44.4 per 100,000 in 2010. The majority of cases were infiltrating ductal carcinoma [76.9%]. Of the registered cases, 44.1% and 48.1% had an unknown grade and stage, respectively. The five-year survival rate was 63 +/- 2%. The low percentage of cases detected by screening merits further evaluation of Bahrain's screening programme. More effort should be made to reduce the proportion of unknown stage and grade breast cancers. Future research has to be directed towards understanding the reasons for Bahrain having the highest incidence rate of breast cancer in the Gulf Cooperation Council countries.



**What are our options in the fight against breast cancer?**

Burney, Ikram A.; Furrukh, Muhammad.; Al Moundhri, Mansour S.

[E-mail: ikramburney@hotmail.com](mailto:ikramburney@hotmail.com)

Sultan Qaboos University Hospital - Department of Medicine

**SQUMJ-Sultan Qaboos University Medical Journal** 2014; 14 (2): 135-137 (20 ref.)

**Keywords:** Incidence; Risk Factors; Mammography

**genetics****The synergic effects of *Crocus sativus* L. and low frequency electromagnetic field on VEGFR2 gene expression in human breast cancer cells.**

Mousavi, Marzieh; Baharara, Javad; Shahrokhbadi, Khadijeh

Islamic Azad University - Research Center for Animal Development Applied Biology - Mashhad Branch

**AJMB-Avicenna Journal of Medical Biotechnology** 2014; 6 (2): 123-127 (20 ref.)

**Keywords:** Crocus; Electromagnetic Fields; Vascular Endothelial Growth Factor Receptor-2; Gene Expression; Neovascularization, Pathologic; MCF-7 Cells

**Abstract:** Angiogenesis, which is required for embryonic development and many physiological events, plays crucial role in many pathological conditions such as tumor growth and metastasis. Recent studies indicate anticancer and antitumor properties of saffron against human cancers. Many processes are affected by Electromagnetic Field [EMF] and its effect on proliferation and gene expression were examined. In this experimental study, the synergic effects of saffron and EMF on VEGFR gene expression in MCF7 cells were investigated. Saffron was extracted using freeze dryer. MCF7 cells were grown in RPMI 1640 medium supplemented with 10% FBS and incubated at 37 °C with 5% CO<sub>2</sub>. After 24 hr cells were treated with saffron extract at concentrations of 100, 200, 400 and 800 microg/ml. Forty eight hr after treatment all flasks were exposed with EMF [50 Hz, 0.004 T]. Then total RNA was extracted and cDNA was synthesized using specific primer. Synthesized products were analyzed by Real Time PCR to determine expression level of VEGFR[2]. Data were analyzed by SPSS [ANOVA and Tukey]. Critical inhibitory effect on VEGFR[2] gene expression was 20% at 400 microg/ml. Synergic use of EMF and saffron extract showed most reduction [38%] at 100 microg/ml. On the other hand synergic use of 200, 400 and 800 microg/ml saffron aqua extract and EMF decline noticeably the VEGFR[2] level of gene expression to 29, 35 and 36%, respectively. EMF itself also reduced VEGFR[2] up to 25% in comparison with control group which is remarkable at p<0.001. Results indicate a decrease in the expression of vascular endothelial growth factor receptor in the treated samples with saffron extract compared to control. This reduction in VEGFR[2] level induced by synergic treatment of saffron and EMF which reveals induction of inhibitory effects of saffron on angiogenesis and could be also considered as a promising chemotherapeutic agent in breast cancer treatment.

**history****A brief history of breast cancer part 1; surgical domination reinvented.**

Lakhtakia, Ritu

[E-mail:ritu@squ.edu.om](mailto:E-mail:ritu@squ.edu.om)

Sultan Qaboos University - College of Medicine and Health Sciences - Department of Pathology

**SQUMJ-Sultan Qaboos University Medical Journal** 2014; 14 (2): 152-155 (24 ref.)

**Keywords:** Culture; History, Medieval; History of Medicine

**pathology****Clinical pathologies of breast cancer in the elderly and youths and their prognosis.**

Ji, Hong; Ai, Ning; Li, Qinghui; Zhang, Kaili; Di, Wang

The Fourth Hospital of Hebei Medical University - Department of Radiology

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 535-538 (17 ref.)

**Keywords:** Aged; Adolescent; Prognosis; Immunohistochemistry

**Abstract:** To explore the correlation between the clinical pathologies of breast cancer in the elderly and youths as well as their prognosis. Two hundred and eighty breast cancer patients were divided into a youth group [< 60, n=120] and an elderly group [> 60, n=160] according to the age. Their routine clinical pathological indices and immune indices were observed and determined, and the prognosis was observed after effective treatment. The positive expression rates of p63, CK5/6, CK14 and CK17 in the elderly group were significantly higher than those of the youth group [P < 0.05]. The tumor-free survival rate of the youth group [95.8%] was significantly higher than that of the elderly group [84.4%] [P < 0.05]. Multivariate Logistic regression analysis showed that the positive expressions of p63 and estrogen receptor, age, and postoperative chemotherapy were the independent risk factors of tumor-free survival rate [P < 0.05]. The immunohistochemical typing characteristics of the elderly and youths were different, and the prognosis of young patients was better, being correlated with the typing.

## Caffeine

### **Caffeine treatment prevented from weight regain after calorie shifting diet induced weight loss.**

Davoodi, Sayed Hossein; Hajimiresmaiel, Seyed Javad; Ajami, Marjan; Mohseni Bandpei, Anoushiravan; Ayatollahi, Seyyed Abdulmajid; Dowlatshahi, Kamran; Javedan, Gholamali; Pazoki Toroudi, Hamidreza  
Shahid Beheshti University of Medical Sciences - Faculty of Nutrition and Food Technology - National Nutrition and Food Technology Research Institute

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 707-718 (35 ref.)

**Keywords:** Weight Gain; Caloric Restriction; Diet; Weight Loss; Obesity; Overweight; Basal Metabolism

**Abstract:** Low calorie diets are always difficult for obese subjects to follow and lead to metabolic and behavioral adaptation. Therefore, we evaluated the effect of caffeine treatment with calorie shifting diet [CSD] on weight loss. Female subjects [n=60; BMI>25] completed 4-weeks control diet, 6-weeks CSD [3 repeated phases; each 2-weeks] and 4-weeks follow-up diet, with or without caffeine treatment [5 mg/Kg/day]. The first 11 days of each phase included calorie restriction with four meals every day and 4 hours intervals. Significant weight and fat loss were observed after 4-weeks of CSD [5.7 +/- 1.24 Kg and 4.84 +/- 1.53 Kg] or CSD+Caffeine [7.57 +/- 2.33 Kg and 5.24 +/- 2.07 Kg] which was consistent for one month of the follow-up [CSD: 5.24 +/- 1.83 Kg and 4.3 +/- 1.62 Kg, CSD+Caffeine: 12.11 +/- 2.31 Kg and 9.85 +/- 1.6 Kg, p < 0.05 vs CSD group] and correlated to the restricted energy intake [p < 0.05]. During three CSD phases, RMR tended to remain unchanged in both groups. While, CSD or CSD + Caffeine treatments, significantly decreased plasma glucose, total-cholesterol, and triacylglycerol [p < 0.05], even during follow-up period [p < 0.05]. HDL-cholesterol was not changed by CSD. Feeling of hunger decreased and subject's satisfaction increased after 4-weeks of CSD [p < 0.05] and remained low to the end of study, while satiety was not affected. Caffeine increased the effect of CSD on feeling of hunger and subject's satisfaction after week 7 [p < 0.05 vs. CSD]. These findings indicated that combination of caffeine treatment with CSD could be an effective alternative approach to weight and fat loss with small changes in RMR and improved tolerance of subjects to the new diet.

## Caloric Restriction

### **Calorie shifting diet versus calorie restriction diet: a comparative clinical trial study.**

Davoodi, Sayed Hossein; Ajami, Marjan; Ayatollahi, Seyyed Abdulmajid; Dowlatshahi, Kamran; Javedan, Gholamali; Pazoki Toroudi, Hamid Reza  
Shahid Beheshti University of Medical Sciences - Faculty of Nutrition and Food Technology - Department of Clinical Nutrition and Dietetic

**IJPM-International Journal of Preventive Medicine** 2014; 5 (4): 447-456 (28 ref.)

**Keywords:** Diet; Weight Loss; Overweight; Obesity

**Abstract:** Finding new tolerable methods in weight loss has largely been an issue of interest for specialists. Present study compared a novel method of calorie shifting diet [CSD] with classic calorie restriction [CR] on weight loss in overweight and obese subjects. Seventy-four subjects (body mass index  $\geq$  25; 37) were randomized to 4 weeks control diet, 6 weeks CSD or CR diets, and 4 weeks follow-up period. CSD consisted of three phases each lasts for 2 weeks, 11 days calorie restriction which included four meals every day, and 4 h fasting between meals follow with 3 days self-selecting diet. CR subjects receive determined low calorie diet. Anthropometric and metabolic measures were assessed at different time points in the study. Four weeks after treatment, significant weight, and fat loss started [6.02 and 5.15 kg] and continued for 1 month of follow-up [5.24 and 4.3 kg], which was correlated to the restricted energy intake [P < 0.05]. During three CSD phases, resting metabolic rate tended to remain unchanged. The decrease in plasma glucose, total cholesterol, and triacylglycerol were greater among subjects on the CSD diet [P < 0.05]. Feeling of hunger decreased and satisfaction increased among those on the CSD diet after 4 weeks [P < 0.05]. The CSD diet was associated with a greater improvement in some anthropometric measures. Adherence was better among CSD subjects. Longer and larger studies are required to determine the long-term safety and efficacy of CSD diet.

## Candida albicans

### **drug effects**

### **Synergistic activity of econazole-nitrate and chelerythrine against clinical isolates of Candida albicans.**

Chen, Zhibao; Li, Xinran; Wu, Xiuping; Wang, Wei; Wang, Wendong; Xin, Mingxun; Shen, Fengge; Liu, Lihui; Liang, Junchao; Li, Lei; Yu, Lu

Heilongjiang Bayi Agricultural University - College of Life Science and Technology

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 567-573 (32 ref.)

**Keywords:** Econazole; Benzophenanthridines; Drug Synergism; Antifungal Agents

**Abstract:** The aim of this investigation was to assess the in-vitro interaction of two antifungal agents, econazole-nitrate and chelerythrine, against ten fluconazole-resistant clinical isolates and one ATCC type strain 10231 of Candida

albicans. The checkerboard microdilution method was performed according to the recommendations of the National Committee for Clinical Laboratory Standards, and the results were determined by visual examination. The interaction intensity was tested in all isolates using the fractional inhibitory concentration index [FICI]. These experiments showed synergism between econazole-nitrate and chelerythrine in antifungal activity against *C. albicans*, and no antagonistic activity was observed in any of the strains tested. Moreover, time-kill curves were performed with selected strains to confirm the positive interactions. The similarity between the results of the FICI values and the time-kill curves revealed that chelerythrine greatly enhances the antifungal effects of econazole-nitrate against isolates of *C. albicans*. This synergistic effect may markedly reduce the dose of econazole-nitrate required to treat candidiasis, thereby decreasing the econazole-nitrate toxic side effects. This novel synergism might provide a potential combination treatment against fungal infections.

## Caprolactam

### analogues and derivatives

#### **Effect of nylon-6 concentration on morphology and efficiency of nanofibrous media.**

Noorpoor, A.R.; Sadighzadeh, A.; Anvari, A.

*E-mail: Noorpoor@ut.ac.ir*

University of Tehran - Graduate Faculty of Environment

**International Journal of Environmental Research** 2014; 8 (2): 421-426 (17 ref.)

**Keywords:** Polymers; Nanofibers

**Abstract:** Electrospinning is a method of nanofiber filter media production. By this method, it is possible to produce media with nanofiber in the range of nanometer to micrometer. Nanofibrous media provide a large specific surface area in a finite volume thus they are suitable for filtration applications. In this study, nanofiber non-woven membranes production of Nylon-6 by electrospinning method is investigated. It is demonstrated that the total filter efficiency and pressure drop increases by increasing the thickness of filter media. The objective of this experimental study was to find out the effect nylon concentration and thickness of nanofilter media. Samples by different Nylon-6 concentrations and time of electrospinning were made. The filtration characterizations of these media were investigated in different laboratory conditions. The SEM micrographs of specimens treated by ImageJ software reveal that the porosity passes by a minimum at 10% concentration. The diameter of nanofiber varied in the range of 47 to 89 nm when the nylon concentration varied from 7.5% to 15% respectively. The efficiency was improved more than three times by electrospinning operation for all three concentration samples. Our results showed that the highest efficiency obtained in this study was 99.96% belonging to 10% Nylon-6 concentration for 45 minutes electrospinning time.

## Carbazoles

### analysis

#### **Non-aqueous electromigration analysis of some degradation products of carvedilol.**

Jouyban, Abolghasem; Hasanzadeh, Mohammad; Shadjou, Nasrin

*E-mail: ajouyban@hotmail.com*

Tabriz University of Medical Sciences - Drug Applied Research Center and Faculty of Pharmacy

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 471-486 (43 ref.)

**Keywords:** Propanolamines-analysis; Electrophoresis, Capillary

**Abstract:** A capillary electrophoresis method was used for assay of some degradation products of carvedilol. The optimized parameters were as; running buffer 80 mM acetate dissolved in methanol/ethanol mixture [65:35% v/v], applied voltage of 19 kV, temperature is 20 °C and the wavelength range of 200-350 nm. The results indicate that the proposed capillary electrophoresis method could effectively separate carvedilol from its degradation products and can be employed as a stability indicating assay method. In addition, the presence of a new unknown degradation product was discovered by this method. In addition, capillary electrophoresis behaviour of carvedilol in photo/force degradation conditions gave valuable information concerning the dissimilarities of their ionization. Results indicated that the proposed method can be used for the determination of carvedilol in human serum. Finally, accuracy of the proposed method was established by recovery experiments from spiked human serum samples.

## Carbonates

### **Precipitation of carbonates crystals by bacteria isolated from a submerged fixed-film bioreactor used for the treatment of urban wastewater.**

Uad, I.; Gonzalez Lopez, J.; Silva Castro, G.A.; Vilchez, J.I.; Gonzalez Martinez, A.; Martin Ramos, D.; Rivadeneyra, A.; Rivadeneyra, M.A.

*E-mail: igl@ugr.es*

**International Journal of Environmental Research** 2014; 8 (2): 435-446 (41 ref.)

**Keywords:** Chemical Precipitation; Bacteria; Bioreactors; Waste Water; Calcium Carbonate

**Abstract:** The precipitation of calcium carbonate by bacteria isolated from submerged fixed-film bioreactor used for the treatment of urban wastewater in both natural and artificial media was studied. However, carbonate precipitation was detected only when the bacteria grow in media added with calcium. Precipitation took place rapidly, and crystal formation began 3 d after inoculation and the percentage of carbonate-forming bacteria was slightly higher than 90%. Seventeen dominant colonies with carbonate precipitation capacity were the dominant heterotrophic plateable bacteria growing aerobically in media added with calcium acetate and calcium chloride. According to their taxonomic affiliations [based on partial sequencing of the 16S-rRNA], the seventeen strains belonged to the following genera of Gram-positive and Gram-negative bacteria: *Arrobacter*, *Bacillus*, *Enterococcus*, *Pseudomonas*, *Agromyces* and *Rhodococcus*. All of these strains formed calcium carbonate crystals, precipitated always as calcite crystals which showed large amounts of bacterial fingerprints or bacteria calcification. In addition all the seventeen bacterial strains showed carbonic anhydrase activity. The results of this research suggest that in submerged fixed-film bioreactors used for the treatment of urban wastewater, the precipitation of carbonates through bacterial action could take place in situ in the presence of certain concentrations of calcium. Moreover, this biological activity could be useful in the CO<sub>2</sub> and calcium capture in urban wastewater treatments.

## Carcinoma, Hepatocellular

### **Treatment of spontaneous ruptured hepatocellular carcinoma: a single-center study.**

Yang, Hanteng; Chen, Kefei; Wei, Yongang; Liu, Fei; Li, Hongyu; Zhou, Zhipeng; Li, Bo

Sichuan University - West China Hospital - Department of Liver Surgery

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 472-476 (29 ref.)

**Keywords:** Liver Neoplasms; Rupture, Spontaneous; Hepatectomy

**Abstract:** Spontaneous rupture of hepatocarcinoma [HCC] is a fatal complication of advanced HCC and is associated with poor prognosis. However, there is no consensus on the best approach to treat hemoperitoneum due to ruptured HCC. In this paper, we evaluate and discuss the outcomes of different treatment methods employed at our center for ruptured HCC. We reviewed the medical records of 132 patients diagnosed with ruptured HCC at our hospital from January 2003 to December 2012 and evaluated and compared the outcomes of five treatment methods for ruptured HCC: conservative treatment, surgical hemostasis, transarterial embolization [TAB], and one-and two-stage resections. There was no significant difference in the median survival time between the conservative treatment and surgical hemostasis groups. Patients in the TAE alone group had a better prognosis than those in the conservative treatment and surgical hemostasis groups. The survival time of the tumor resection group was obviously better than that of the conservative treatment, surgical hemostasis, and TAE alone groups, but no significant difference was observed between the one-stage and two-stage resection groups. One-stage hepatectomy is a better option for patients with preserved liver function, whereas TAE is a better option for those with poorly preserved liver function.

## Carcinoma, Mucoepidermoid

### **diagnosis**

#### **Sclerosing mucoepidermoid carcinoma a unique case.**

Bhat, Keshava; Pandey, Bhavna; Shetty, Pushparaja; Manohar, Vidya; Shruthilaxmi, M.K.; Patidar, Madhvik

*E-mail: kooks85@gmail.com*

Vydehi Institute of Dental Sciences

**SQUMJ-Sultan Qaboos University Medical Journal** 2014; 14 (2): 235-238 (17 ref.)

**Keywords:** Parotid Neoplasms; Parotid Gland-surgery; Salivary Gland Neoplasms; Tomography, X-Ray Computed

**Abstract:** Sclerosing mucoepidermoid carcinoma is an unusual type of mucoepidermoid carcinoma with special histological features which differ from those of the classic type of mucoepidermoid carcinoma. We report the case of a 32-year-old male, who reported to the Vydehi Institute of Dental Sciences, Bangalore, India, with an asymptomatic swelling over the right parotid region which had been present for the previous two and a half years. Histopathological sections of the tumour mass showed mucous and epidermoid cell nests in a dense, hyalinised, sclerotic stroma. A diagnosis of sclerosing mucoepidermoid carcinoma was made. A superficial parotidectomy was performed on the patient and he has remained disease free to date.

## Carcinoma, Non-Small-Cell Lung

### **ERCC1 and BRCA1 mRNA expression predicts the clinical outcome of non-small cell lung cancer receiving platinum-based chemotherapy.**

Xian Jun, Feng; Xiu guang, Qin; Li, Zang; Fens; Wan Ling, Wang; Dong, Liu; Ping fa, Li

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 488-492 (21 ref.)

**Keywords:** Lung Neoplasms; DNA-Binding Proteins; Endonucleases; Genes, BRCA1; RNA, Messenger; Platinum; Antineoplastic Agents; Tumor Suppressor Proteins; Ribonucleoside; Diphosphate Reductase

**Abstract:** We conducted a perspective study to investigate the association between mRNA expression quantities of ERCC1, BRCA1, RRM1 and RRM2 and response to chemotherapy and clinical outcome of advance Non-Small Cell Lung Cancer.[NSCLC]. Two hundred eight patients who were diagnosed as advanced stage NSCLC were included in our study. A fluorescence-based and real-time detection method was used to determine the relative cDNA quantification for ERCC1, BRCA1, RRM1 and RRM2, and 6-actin was used as the reference gene. The median expression levels of ERCC1, BRCA1, RRM1 and RRM2 mRNA were  $0.67 \pm 0.17$ ,  $0.095 \pm 0.012$ ,  $0.24 \pm 0.17$  and  $2.45 \pm 0.32$ , respectively. Our study found that the low ERCC1 [OR=1.82, 95% CI=0.01-3.20] and LowBRCA1 [OR=2.53, 95%CI=0.38-4.64] mRNA expression was more likely to response to chemotherapy when compared with high expression, respectively. Multivariate Cox regression analysis indicated that patients with low mRNA expression of ERCC1 and BRCA1 attained 0.43 [OR=0.43, 95%CI=0.27-0.89] and 0.37 [OR=0.37, 95%CI=0.22-0.66] fold risk of death from NSCLC. However, we found RRM1 and RRM2 mRNA expression could not influence the response to chemotherapy and clinical outcome of NSCLC. ERCC1 and BRCA1 mRNA expression could be important predictive markers for individualized platinum-based chemotherapy for NSCLC patients.

### drug therapy

### **Comparing docetaxel plus cisplatin with paclitaxel plus carboplatin in chemotherapy-naive patients with advanced non-small-cell lung cancer: a single institute study.**

Khodadad, Kian; Khosravi, Adnan; Esfahani Monfared, Zahra; Karimi, Shirin; Seifi, Sharare

Shahid Beheshti University of Medical Sciences - National Research Institute of Tuberculosis and Lung Diseases [NRITLD] - Chronic Respiratory Diseases Research Center

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 575-581 (14 ref.)

**Keywords:** Lung Neoplasms; Taxoids; Cisplatin; Paclitaxel; Carboplatin; Antineoplastic Agents

**Abstract:** The backbone of treatment in advanced non-small cell lung cancer is platinum-based doublet chemotherapy. We intended to compare the effectiveness of two commonly used regimens in real world practice. This single institute, parallel comparative post marketing study included 100 patients with chemo-naïve advanced [stage IIIB, IV] non-small cell lung cancer and Eastern Cooperative Oncology Group performance status of 0 to 2. They were randomly assigned by stratified blocks to receive Docetaxel/ Cisplatin [DC, n=50] on day 1 or Paclitaxel/Carboplatin AUC 5 [PC, n=50] on day 1, every 3 weeks for up to six cycles. Primary end point was progression free survival [PFS]; secondary end points were objective response rate, overall survival [OS] and toxicity. The administered dosage could be modified according to clinician's discretion for each individual patient. PFS was similar between DC and PC arms [4.5 +/- 0.3 v 4.6 +/- 1.8 months, respectively; HR= 1.337; 95% CI: 0.874 to 2.046, P = 0.181]. Although median overall survival for DC arm was longer [17.2 +/- 4.4 m] than PC arm [10.6 +/- 0.7 m] but was not statistically significant [P = 0.300]. The 1-year survival rates were in favor of DC arm [53.1% v 37.9%]. Objective response rates were similar in both groups. In our study, hematologic toxicity and neuropathy were more frequent in DC and PC arms, respectively. In our study two commonly used regimens of DC and PC showed statistically similar outcomes in terms of PFS and OS, albeit numerically results of OS and 1-year survival were in favor of DC arm.

## Cardio-Renal Syndrome

### diagnosis

### **Cardiorenal syndrome followed by acute hepatitis C in a patient with acute myeloid leukemia.**

Mihaila, Romeo Gabriel

[E-mail:romeomihaila@yahoo.com](mailto:E-mail:romeomihaila@yahoo.com)

[Lucian Blaga] University of Sibiu - Faculty of Medicine

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 674-676 (10 ref.)

**Keywords:** Hepatitis C; Acute Disease; Leukemia, Myeloid, Acute; Renal Dialysis

**Abstract:** Cardiorenal syndrome involves altering cardiac and renal function. These patients frequently develop resistance to diuretic therapy, so that ultrafiltration should be applied in emergency for saving them. Concomitant presence of an active hematologic malignancy represents an important complicating factor. We present the case of an elderly patient with acute myeloid leukemia, appeared on the background of myelodysplastic syndrome who, during marrow aplasia occurred after the first course of induction chemotherapy, developed a Cardiorenal syndrome, which

required repeated sessions of hemodialysis. Complete hematologic remission and efficiency of fluid depletion therapy allowed the second course of polychemotherapy, after which the patient developed an acute hepatitis C. After 8 months of complete hematologic remission that persists, the patient will be put on the standard antiviral treatment.

## Cardiovascular System

### **Cardiovascular risk factors among retired attendees visiting primary care clinics.**

Al Turki, T Yousef Abdullah

*E-mail: yalturki@ksu.edu.sa*

King Saud University - College of Medicine - Department of Family and Community Medicine

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 515-518 (34 ref.)

**Keywords:** Risk Factors; Retirement; Primary Health Care; Cross-Sectional Studies; Diabetes Mellitus; Dyslipidemias; Obesity; Smoking

**Abstract:** The aim of this study was to highlight cardiovascular risk factors among retired attendees attending a primary care clinic, Riyadh, Saudi Arabia. A cross sectional study was conducted from January to February 2013 at Primary Care Clinics of King Khalid University Hospital and College of Medicine, King Saud University, Riyadh, Saudi Arabia. All retired attendees were interviewed by family physician, and their duration of retirement was determined. Their cardiovascular risk factors were confirmed from their medical records. The cardiovascular risk factors included history of diabetes mellitus, hypertension, dyslipidemia, obesity, and smoking. Their weight and height were recorded during the consultation and Body Mass Index was calculated to decide about those classified as obesity > 30. All data were entered and analyzed using statistical package of social science SPSS version 17 software. The present study showed that 19.5% of retired attendees presenting at primary care clinic were early retired before the age of 60 years, while 80.5% were normally retired. The prevalence of cardiovascular risk factors showed: Hypertension among 73% attendees, Diabetes Mellitus in 67%, dyslipidemia in 71%, Obesity 29%, and Smoking 13% of the patients. This study concluded that cardiovascular risk factors among retired attendees of a primary care clinic are common, and need to be taken in to priority consideration while improving the health care of retired people.

## Carica

### **Prevention of fall in platelet count by Carica papaya leaf juice in carboplatin induced thrombocytopenia in mice.**

Tahir, Nayyara; Zaheer, Zujaja; Kausar, Samina; Chiragh, Sadia

Services Institute of Medical Sciences

**Biomedica** 2014; 30 (1): 21-24 (19 ref.)

**Keywords:** Platelet Count; Plant Leaves; Carboplatin; Thrombocytopenia; Mice

**Abstract:** There are no effective methods to treat thrombocytopenia once it occurs. Transfusions, growth factor injections and bone marrow transplant have their limitations. So there is increased need for research of drugs that could prevent and treat thrombocytopenia. The objective of the study to determine the effect of different doses of male and female papaya leaf juice on prevention of carboplatin induced thrombocytopenia in mice. A total of 55 Swiss albino mice were randomly divided into five groups [C, M[10], M[5], F[10] and F[5]. Thrombocytopenia was induced in all groups by a single intraperitoneal injection of carboplatin. Male papaya leaf juice was given to prevent thrombocytopenia to groups M[w] and M[5] and female papaya leaf juice was given to F[w] and F[5]. On days 0, 7, 14 and 21 blood samples were collected by cardiac puncture for platelet count. Significance of difference was calculated by one way ANOVA. After carboplatin injection, platelet count decreased. Papaya leaf juice prevented fall in platelet count throughout the study period with p-value < 0.001. Difference between male and female papaya leaf juice was not significant while higher dose [10 ml/kg] produced significantly higher responses as compared to low dose [5 ml/kg]. Papaya leaf juice prevents reversible thrombocytopenia induced by carboplatin in a dose dependent manner. There is no difference between male and female plants in this respect.

## Cataract Extraction

### **Comparison of the efficacy of subtenon with peribulbar local anesthesia without hyaluronidase in patients undergoing cataract surgery.**

Khan, Sher Akbar; Alam, Mumtaz; Aftab, Akhuzada Muhammad; Iqbal, Mustafa

LRBT Hospital - Department of Ophthalmology

**JCPSP-Journal of the College of Physicians and Surgeons Pakistan** 2014; 24 (5): 331-334 (23 ref.)

**Keywords:** Tenon Capsule; Anesthesia, Local; Hyaluronoglucosaminidase

**Abstract:** To compare the efficacy of subtenon with peribulbar local anesthesia without hyaluronidase in patients undergoing cataract surgery. A randomized controlled trial. Eye [B] Unit, Khyber Teaching Hospital, Peshawar, from October 2009 to October 2010. Patients undergoing cataract surgery were divided into two groups. Group A received

subtenon anesthesia and group B received peribulbar anesthesia. Pain score, akinesia and intraocular pressure were compared in the two groups. Statistical Package for Social Sciences-14.0 was used for data analysis. There were 304 patients, 152 patients in each group. At the time of injection, there was less pain in group A as compared to group B [ $p < 0.001$ ]. At the time of surgery and till 90 minutes after administration of anesthesia, there was no significant difference in pain between the 2 groups [ $p = 0.999$  and  $0.59$  respectively]. Group A had better akinesia as compared to group B [ $p = 0.04$ ]. There was a greater rise in mean intraocular pressure just after injection in group B as compared to group A [ $p < 0.001$ ]; in both groups, the intraocular pressure declined to its base level 10 minutes after the injection [ $p = 0.52$ ]. Subtenon anesthesia is less painful at the time of its administration, provides better akinesia and leads to smaller rise in intraocular pressure just after the injection than peribulbar anesthesia.

## Catfishes

### Joint action toxicity and biochemical effects of binary mixtures of Forcados light crude oil and three dispersants against *Clarias gariepinus*.

Sogbanmu, T.O.; Otitoloju, A.A.

[E-mail:topesho@gmail.com](mailto:E-mail:topesho@gmail.com)

University of Lagos - Faculty of Science - Ecotoxicology Unit, Department of Zoology

*International Journal of Environmental Research* 2014; 8 (2): 395-402 (40 ref.)

**Keywords:** Chordata; Petroleum; Joints; Malondialdehyde; Glutathione; Glutathione Transferase

**Abstract:** Laboratory-scale experiments were conducted to evaluate the joint action toxicity and biochemical effects of sublethal concentrations of Forcados light crude oil [FLCO] and three dispersants against *Clarias gariepinus* over a period of 28 days. The derived 96hrLC[50] values revealed that the dispersant, DS/TT/066 [0.03mL/L] was the most toxic, followed by dispersant, OC/TT/OSI [0.19mL/L], FLCO [5.06mL/L] and crystal clear oil dispersant [CCOD = 12.06mL/L] the least toxic when acting singly. Joint action toxicity evaluations of FLCO and dispersants showed that the interaction between FLCO : DS/TT/066 and FLCO : OC/TT/OSI was synergistic [synergistic ratio [SR] > 1] with SR values of 10.5 and 3 respectively. However, for the mixture of FLCO : CCOD, the interaction was antagonistic [SR < 1] with SR value of 0.97. The result of the biochemical effects study revealed that malondialdehyde [MDA] levels decreased significantly [ $P < 0.05$ ] in the exposed fishes, reduced glutathione [GSH] and glutathione-s-transferase [GST] activities increased significantly [ $P < 0.05$ ] in fishes exposed to FLCO : CCOD mixture alone while there was no significant difference [ $p > 0.05$ ] in superoxide dismutase [SOD] and catalase [CAT] activities in all the exposed fishes compared to control animals. The observed increase in GSH and GST levels in conjunction with a decrease in MDA concentration in the liver of test animals exposed to binary mixtures of FLCO and CCOD reveals the ability of the animals to overcome the effects of lipid peroxidation in this group. Further studies on the mechanism of toxicity of these dispersants in field and laboratory assays are recommended.

## Caulerpa

### chemistry

#### Phytochemistry and biologic activities of *Caulerpa peltata* native to Oman sea.

Movahhedin, Nasrin; Barar, Jaleh; Azad, Fatemeh Fathi; Barzegari, Abolfazl; Nazemiyeh, Hossein

Tabriz University of Medical Sciences - Faculty of Pharmacy - Research Center for Pharmaceutical Nanotechnology

*IJPR-Iranian Journal of Pharmaceutical Research* 2014; 13 (2): 515-521 (37 ref.)

**Keywords:** Plant Extracts; Oceans and Seas; Methanol; Artemia; Biphenyl Compounds; Picrates

**Abstract:** General toxicity, antiproliferative, antibacterial and antioxidant activities of *Caulerpa peltata* J.V.Lamouroux [Caulerpaceae] collected from Oman Sea were investigated. Dried, ground alga was Soxhlet-extracted with hexane, dichloromethane and methanol successively. The methanol extract was subjected to vacuum liquid chromatography [VLC] fractionation on silica gel using a step gradient of different mixture of solvents. A known alkaloid, caulerpin, was subsequently isolated from the fraction eluted by ethyl acetate 100%. The antioxidant activity of all extracts was assessed by using the [DPPH] assay. Antiproliferative activity of the all extracts and caulerpin against the cancerous cell line was evaluated using MTT assay. General toxicity of extracts was determined using Brine Shrimp Lethality Assay [BSLA]. Based on our results, a weak activity observed for all extracts in MTT assay, while they were toxic toward brine shrimp nauplii comparing to the podophyllotoxin. This is the first report on phytochemistry and bioactivity of *C. peltata* which collected from Oman Sea.

## Cesarean Section

### **Elective caesarean section for breech presentation in first pregnancy and subsequent mode of labour.**

Khaskheli, Meharun Nissa; Baloch, Shahla; Sheeba, Aneela

[E-mail: khaskhelimn@yahoo.com](mailto:khaskhelimn@yahoo.com)

Liaquat University of Medical and Health Sciences - Department of Obstetrics and Gynaecology

**JCPSP-Journal of the College of Physicians and Surgeons Pakistan** 2014; 24 (5): 323-326 (24 ref.)

**Keywords:** Elective Surgical Procedures; Breech Presentation; Pregnancy; Labor, Obstetric; Cohort Studies

**Abstract:** To determine the effect on subsequent mode of labour in case of previous elective caesarean for breech presentation in primiparous women. A cohort study. Department of Obstetrics and Gynaecology, Liaquat University of Medical and Health Sciences, Jamshoro, Unit-1 and 1V, from January 2005 to December 2009. All women with previous one elective caesarean section for breech or cephalic presentation visited OPD for antenatal checkup or admitted in emergency in maternity or labour ward were recruited for the study, while the women with previous 2 and 3 caesarean section were excluded from the study. The case records of these women were reviewed thoroughly, and entered in predesigned proforma. The main outcome measure was mode of labour in current pregnancy decided electively or adopted in emergency. Out of the total, 131 [16.92%] women had previous elective caesarean section due to breech presentation while 643 [83.07%] women had previous elective caesarean section with cephalic presentation. Overall repeat caesarean section rate was 92 [70.22%] in women with previous breech presentation [n=131] in comparison with 475 [73.87%] women with previous cephalic presentation n=643 [RR=1.04, p=0.32]. The vaginal birth rate after elective caesarean section due to breech presentation was 39 [29.77%] in comparison with 168 [26.12%] cases with previous cephalic presentation [RR=0.98, p=0.83]. Women having elective caesarean section for breech presentation in their previous pregnancy had about 1 in 6 chance of having repeat elective caesarean section.

### **A study of post-caesarean section wound infections in a regional referral hospital, Oman.**

Dhar, Hansa; Al Busaidi, Ibrahim; Rathi, Bhawna; Nimre, Eman A.; Sachdeva, Vibha; Hamdi, Ilham

Nizwa Hospital - Department of Obstetrics and Gynaecology

**SQUMJ-Sultan Qaboos University Medical Journal** 2014; 14 (2): 197-203 (28 ref.)

**Keywords:** Pregnancy; Surgical Wound Infection; Referral and Consultation; Risk Factors; Retrospective Studies; Cross-Sectional Studies; Incidence; Anti-Bacterial Agents

**Abstract:** The aim of this study was to determine the incidence of surgical site infections [SSI] in patients undergoing a Caesarean section [CS] and to identify risk factors, common bacterial pathogens and antibiotic sensitivity. SSI significantly affect the patients quality of life by increasing morbidity and extending hospital stays. A retrospective cross-sectional study was conducted in Nizwa Hospital, Oman, to determine the incidence of post-Caesarean [PCS] SSI from 2001 to 2012. This was followed by a case-control study of 211 PCS cases with SSL Controls [220] were randomly selected cases, at the same hospital in the same time period, who had undergone CS without any SSL Data was collected on CS type, risk factors, demographic profile, type of organism, drug sensitivity and date of infection. The total number of PCS wound infections was 211 [2.66%]. There was a four-fold higher incidence of premature rupture of the membranes [37, 17.53%] and a three-fold higher incidence of diabetes [32, 15.16%] in the PCS cases compared with controls. The most common organisms responsible for SSI were *Staphylococcus aureus* [66, 31.27%] and the Gram-negative *Escherichia coli* group [40, 18.95%]. The most sensitive antibiotics were aminoglycoside and cephalosporin. Polymicrobial infections were noted in 42 [19.90%], while 47 [22.27%] yielded no growth. A high incidence of associated risk factors like obesity, hypertension, anaemia and wound haematoma was noted. Measures are recommended to reduce the incidence of SSI, including the implementation of infection prevention practices and the administration of antibiotic prophylaxis with rigorous surgical techniques.

### **Uterine closure with unlocked suture in cesarean section: safety and Quality.**

Turan, Guluzar Arzu; Gur, Esra Bahar; Tatar, Sumeysra; Gokduman, Ayse; Guclu, Serkan

[E-mail: arzuturan74@yahoo.com](mailto:arzuturan74@yahoo.com)

Sifa University Hospital - Department of Obstetrics and Gynecology

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 530-534 (20 ref.)

**Keywords:** Wound Closure Techniques; Suture Techniques; Sutures; Uterus; Prospective Studies; Hemoglobins; Creatine Kinase; Cicatrix

**Abstract:** Comparing locked and unlocked uterine closure techniques in terms of bleeding control and uterine incision healing. The patients undergoing cesarean section in Sifa University Hospital between May - October 2012 were accepted to this prospective controlled study. Primarily, safety was evaluated. The hemoglobin count [HC] and serum creatine kinase [CK] levels of the patients in the locked [n = 47] and unlocked [n = 35] groups were measured just before and 24 hours after operation. Hemoglobin deficit, increase in CK and the additional hemostatic sutures were compared. Secondly, uterine scar healing was evaluated three months later. Scar thickness, niche and percentage of thinning of the scar region of the locked [n = 27] and unlocked [n = 32] groups were calculated and compared. The hemoglobin deficit was similar in two groups. CK rise was less in the unlocked group but it was not significant [P = 0.082]. Unlocked group needed more additional sutures [P = 0.016]. The thickness of the niche and the percentage of thinning of the scar region were significantly less in the unlocked group [P= 0.002, P=0.000]. Unlocked uterine closure technique is safe and has less damage to the myometrium.



## Chest Pain

### etiology

#### Atypical cause of a typical chest pain.

Haider, Imran

*E-mail: drimranhaider6@yahoo.com*

Saint Luke's Hospital - Department of Internal Medicine

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 684-684 (3 ref.)

**Keywords:** Hemoglobin SC Disease; Anemia, Hemolytic

## Child Development

#### The impact of nutrition on child development at 3 years in a rural community of India.

Ali, Syed Sadat; Dhaded; Goudar, Shivprasad

*E-mail: drsadatali@gmail.com*

Dr. BR Ambedkar Medical College - Department of Physiology

**IJPM-International Journal of Preventive Medicine** 2014; 5 (4): 494-499 (20 ref.)

**Keywords:** Child Nutritional Physiological Phenomena; Rural Population; Breast Feeding; Child; Questionnaires; Malnutrition

**Abstract:** In India, child malnutrition is mostly the result of high levels of exposure to infection and inappropriate infant and young child feeding and caring practices and has its origins almost entirely during the first 2 to 3 years of life. This study aims in assessing the impact of breast feeding on child development of children at 3 years. About 530 children at 3 years were assessed for developmental delay by Ages and Stages Questionnaire [ASQ]. Growth measurements and hemoglobin estimation were carried out at the time of developmental evaluation. Physical growth was assessed by using World Health Organization growth charts. Children were assessed for their duration of breast feeding and weaning period. They were analyzed for the feeding practices versus developmental outcome. Chi-square test was used to compare the categorical variables. Differences were considered significant at  $P < 0.05$  level. Children who were exclusively breastfed for at least 6 or more months had significantly higher ASQ scores with P value for communication [0.003], gross motor [0.004], fine motor [0.007] and problem solving [0.013] except personal social [0.059] compared with children who had exclusively breastfed for less than 6 months. Children, who were weaned beyond 12[th] month, had significantly higher ASQ scores with P value for communication [0.004], gross motor [0.091], fine motor [0.044], problem solving [0.001] and personal social [0.012] as against those who were weaned at 6th month or earlier in all domains. Breast feeding has a positive effect on the overall development of the child and should be promoted in the present generation. In India, child malnutrition is responsible for a higher percentage of the country's burden of disease. Undernutrition also affects cognitive and motor development and undermines educational attainment; and ultimately impacts on productivity at work and at home, with adverse implications for income and economic growth.

## Child Welfare

#### Impact of an IEC [Information, Education and Communication] intervention on key family practices of mothers related to child health in Jamshoro, Sindh.

Shaikh, Salma; Memon, Shazia; Ahmed, Imran; Amna; Manzoor, Rabia; Shaikh, Saleem

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 611-618 (25 ref.)

**Keywords:** Family Practice; Mothers; Communication; Health Education; Child

**Abstract:** To determine change in practice of mothers having children less than five years of age in five key areas related to child health, growth and development including immunization, feeding during illness, appropriate home treatment for infections and care seeking behavior. This was a community based interventional study of Information, Education and Communication [IEC] intervention in the UC Jamshoro, Taluka Kotri, district Jamshoro of 15 months duration from March 2011 to June 2012. Ninety five mothers having children less than five years of age were selected by systematic random sampling for house hold based survey by questionnaire designed by EPP evaluation and health section of UNICEF during baseline and post-intervention phases. Base line data was collected from the interventional area then health education messages were given through written and pictorial material by LHWs for 9 months. To measure the impact health education messages, data was again collected by same questionnaire are from the same union council during post-intervention phase. During baseline survey except immunization all other key family practices were poor. After 9 months of intervention of repeated health education sessions through LHW during their routine visits all practices were improved with statistically significant difference. Regarding the comparison of the results between baseline and post-intervention surveys we found that except immunization which was already better, all those practices which requires mother's knowledge and practice were improved after our intervention with significant P-values. Improving the mother's education level is very important, to empower the first care provider of child in the community. However, in the mean time, health educational messages reteted to the limited number of key family practices should be disseminated.

## Cholangiopancreatography, Endoscopic Retrograde

### **Therapeutic ERCP in patient with situs inversus totalis and ampullary diverticulum.**

Kamani, Lubna; Kumar, Raj; Mahmood, Shahid; Jafri M., Sana; Siddiqui, Faisal

*E-mail:lkamani@yahoo.com*

Liaquat National Hospital - Department of Gastroenterology

**JCPSP-Journal of the College of Physicians and Surgeons Pakistan** 2014; 24 (5): 365-366 (8 ref.)

**Keywords:** Situs Inversus-therapy; Diverticulum; Ampulla of Vater; Choledocholithiasis; Tomography, X-Ray Computed

**Abstract:** Situs Inversus Totalis [SIT] is a rare entity with complete transposition of all viscera, making endoscopic and surgical procedures challenging and complicated. We describe a rare case of a 55 years old man with SIT and ampullary diverticulum presenting with cholangitis and deranged liver function tests due to common bile duct stones. Therapeutic Endoscopic Retrograde Cholangiopancreatography [ERCP] was planned to relieve biliary obstruction and removal of stones. Procedure was started after informed consent in usual left semi-prone position but rotation of scope to 180 degrees and shortening under fluoroscopic guidance was done to attain and maintain desirable ampullary position and cannulation was done with standard sphincterotome followed by sphincterotomy and sphincteroplasty. ERCP was performed successfully despite difficulties of dual pathology and the patient made uneventful recovery.

## Cholecystectomy, Laparoscopic

### **Laparoscopic cholecystectomy in acute gallstone pancreatitis in index hospital admission: Feasibility and safety.**

Sangrasi, Ahmed Khan; Syed, BM; Memon, Amir Iqbal; Laghari, Abdul Aziz; Talpur, K. Altaf Hussain; Qureshi, Jawaid Naeem

*E-mail:ahmedsangrasi@hotmail.com*

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 601-605 (33 ref.)

**Keywords:** Gallstones; Pancreatitis; Acute Disease; Prospective Studies

**Abstract:** Acute gallstone pancreatitis is quite common throughout the globe. Conventionally definitive cholecystectomy has been delayed in index hospital admission. Since the last decade timing of cholecystectomy is gradually shifting towards the earlier phase of disease and currently gallstone pancreatitis is being evaluated as a further indication for laparoscopic cholecystectomy. There is also great concern regarding compliance of patients for definitive surgery due to poverty, ignorance and illiteracy in developing countries. The aim of this study was to assess the feasibility and safety of laparoscopic cholecystectomy as a definitive treatment in patients with mild and resolving gall stone pancreatitis. This was a prospective study from July 2009 to June 2012. Patients were diagnosed by clinical examination, biochemical tests, ultrasonography and contrast enhanced CT. Patients with mild form of the disease [Ranson Score <3] and who showed clinical improvement were offered laparoscopic cholecystectomy in index hospital admission. Those who were unfit for surgery were referred for endoscopic sphincterotomy. Common bile duct stones were excluded preoperatively. A total of 38 patients were admitted with acute gallstone pancreatitis in the study period. The mean age of patients was 46.3 years with male to female ratio of 11727. 22 [57.8%] patients were selected for laparoscopic cholecystectomy and procedure was completed successfully. Ten [26.3%] patients were referred for ERCP and endoscopic sphincterotomy and 11 [28.9%] were managed by conservative treatment and went without any definitive treatment. Mean duration of time from onset of symptoms and laparoscopic cholecystectomy was 7 days [range 4-10]. Mean duration of operative time was 45 minutes and hospital stay was 7 days. There was no operative mortality. No major intra-operative or post-operative complication was recorded, two patients [9%] had minor complications. Laparoscopic cholecystectomy can be safely performed in selected cases of mild gallstone pancreatitis in order to prevent further attacks of acute pancreatitis and other consequences of d6l3y8() treatment. Furthermore it resolves the problem of noncompliance of patients in third world countries where many patients are lost for definitive treatment.

## Chronic Periodontitis

### **Chronic periodontitis, a silent hazardous disease.**

Anwar, Ayesha; Amir, Qurat Ul Aien; Anwar, Muhammad Waqar Khan Saira; Qureshi, Hamid Javed

Rashid Latif Medical College - Department of Physiology

**Biomedica** 2014; 30 (1): 34-39 (33 ref.)

**Keywords:** Cardiovascular Diseases; C-Reactive Protein; Atherosclerosis; Cross-Sectional Studies

**Abstract:** Chronic periodontitis is a common disease, which occurs as an outcome of tooth supporting tissue's inflammation [periodontal ligament and gums], initiated by the exposure of the periodontium to dental plaque. By the action of various toxic products liberated from pathogenic plaque bacteria there is periodontal destruction, as well as hosts inflammatory responses elicited against plaque bacteria and their products. Inflammatory processes can be considered as the most essential functional part of pathophysiology of atherosclerosis resulting in cardiovascular disease [CVD]. Elevated levels of C -reactive Protein [CRP] have been associated with CVD and regarded as

independent determinant of atherosclerosis. This study has been carried out to assess the possible relationship between chronic peri-odontitis and CVD determinants. This cross sectional study involved a total of 100 subjects including 50 chronic periodontitis patients and 50 healthy controls between the ages of 35 - 40 years. The patients were obtained from de-Montmorency College of Dentistry, Lahore. A detailed personal history, past medical and dental history was taken. Patients of chronic periodontitis were selected using Community Periodontal Index of Treatment Needs [CPITN], according to inclusion and exclusion criteria. Blood sample were drawn and CRP was measured by using standard enzyme linked immunosorbent assay [ELISA] method. These parameters were compared in chronic periodontitis patients with age and gender matched healthy controls, to observe the significance of difference. The results of this study showed that serum CRP which was a strong independent risk marker of CVD is statistically significantly elevated in chronic periodontitis patients as compared with age and gender matched healthy controls. The correlation between serum CRP and severity of chronic periodontitis was also highly significant. The results of this study suggest that elevated CRP in chronic periodontitis patients may predispose them to the development of early atherosclerosis. Because of the significant association of elevated inflammatory mediators with CVD, their determination may help to improve the prediction and prevention of CVD in chronic periodontitis patients as well as these results is expected to bring awareness in people about oral hygiene.

## Citrus

### **Systematic analysis of main constituents in rat biological samples after oral administration of the methanol extract of Fructus aurantii by HPLC-ESI-MS/MS.**

Zhang, Jingze; Gao, Wenyuan; Liu, Zhen; Zhang, Zhidan; Liu, Changxiao  
Logistics College of Chinese People's Armed Police Forces - Department of Pharmacy

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 493-503 (27 ref.)

**Keywords:** Plant Extracts; Methanol; Administration, Oral; Chromatography, High Pressure Liquid; Spectrometry, Mass, Electrospray Ionization; Rats; Plasma; Urine; Feces

**Abstract:** High performance liquid chromatography [HPLC] with diode array detection [DAD] and electrospray ionization tandem mass spectrometry [ESI/MS/MS] was used to analyze the main components in the methanol extract of Fructus Aurantii [FA] and the metabolites in rat biological samples after oral administration of the methanol extract of FA. There were 31 constituents identified in the extract of FA including 2 alkaloids, 1 coumarin, 10 flavonoid glycosides and 18 polymethoxylated flavones. According to the UV spectrum and MS fragment character of main components in the methanol extract of FA. 18 parent constituents and 11 metabolites were tentatively identified in rat biological samples. Three groups of components in biological samples detected included flavonoid glycosides, their glucuronides and polymethoxylated flavones. It was interested that flavonoid glycosides, their glucuronides and polymethoxylated flavones can be investigated in rat plasma and urine, while in rat feces samples only flavonoid glycosides were detected. Triglycosyl, naringenin, neoeriocitrin, neoeriocitrin narirutin and hesperidin were the main components in rat feces which were found either in the plasma or in urine samples. However, naringin and neohesperidin were the main flavonoid glycosides which absorbed after oral administration. Except flavonoid glycosides and their glucuronides, polymethoxylated flavones also the constituents absorbed because it was investigated mainly in rat plasma and urine but not in feces samples. The identification and elucidation of parent and metabolism components analyzed in biological samples provided the data for further pharmacological and clinical research on FA.

## Communication

### **Do the rates we report misinform the local programs?**

Darvishi, Mohammad; Noori, Atefeh; Assari, Shervin; Moazen, Babak

AJA University of Medical Sciences - Infectious Diseases and Tropical Medicine Research Center [IDTMRC]

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 682-683 (15 ref.)

**Keywords:** Research Design; Research Report; Published Erratum

## Coronary Artery Disease

### **Correlation of CRP, fasting serum triglycerides and obesity as cardiovascular risk factors.**

Firdous, Samar

[E-mail: dr\\_samarfirdous@yahoo.com](mailto:dr_samarfirdous@yahoo.com)

**JCPSP-Journal of the College of Physicians and Surgeons Pakistan** 2014; 24 (5): 308-313 (25 ref.)

**Keywords:** C-Reactive Protein; Triglycerides; Obesity; Cardiovascular Diseases; Risk Factors; Cross-Sectional Studies; Body Mass Index

**Abstract:** To determine the correlation of C-reactive protein [CRP] with fasting triglycerides [TG] among pre-obese and obese patients without established diagnosis of coronary artery disease [CAD]. A comparative cross-sectional study. Mayo Hospital, Lahore, from January to June 2010. Patients with BMI > 23 kg/m<sup>2</sup> aged between 18-65 years were inducted and above variables were studied. Patients with signs of fluid retention, collagen vascular disease, CAD, patients on corticosteroids, immunomodulators or lipid lowering medications and febrile patients were not recruited.

Body mass index was also determined. Independent sample t-test was applied to see the mean difference of age, CRP level and triglycerides level in relation to gender. Chi-square test was used to see the association between qualitative variables. ANOVA was applied to see CRP and fasting serum TG level in relation to BMI categories. Pearson correlation and simple linear regression was applied to see the dependency of CRP and triglycerides with BMI. P-value < 0.05 was taken as significant. Raised CRP was major finding among all groups of BMI. Most of obese and pre-obese patients were young and middle aged and belonged to pre-obese group followed by class-1 and class-2 obesity. CRP level increased with body mass index. No such trend was observed for triglycerides. There was an intermediate positive correlation between CRP and BMI and triglycerides and BMI showed a weak negative correlation. If BMI increases by 1 unit on the average, CRP rises by 0.239 times and this unit rise was significant. Whereas 1 unit rise increase in triglycerides on the average cause CRP to decrease -0.006 times but this value was insignificant. Raised CRP and high fasting TG were major findings in all age groups especially among young and middle aged people. Obesity, hypertriglyceridemia and raised CRP are interrelated suggesting that obesity is not only linked to hypertriglyceridemia but vascular inflammation among pre-obese and obese without overt diabetes mellitus causes high CRP as well and this can be used as a marker to predict the future risk of CAD. However, in the absence of dyslipidaemia, raised CRP can still be considered as a strong predictor of CAD and stroke.

## Counseling

### **Evaluation of outpatient-pharmacists counseling behavior and content in a teaching hospital in Jordan- an observational study.**

Alenezi, Nouf A.; Wazaifi, Mayyada M.; Albsoul Younes, Abla  
Kuwait Chest Hospital - Al Sabah Medical Area

**Jordan Journal of Pharmaceutical Sciences** 2014; 7 (1): 77-87 (29 ref.)

**Keywords:** Pharmacists; Outpatients; Hospitals, Teaching; Pharmacy; Behavior; Pharmaceutical Services

**Abstract:** Pharmacists do have a unique opportunity to educate patients about their medications in order to identify, prevent and manage any potential problems they may have faced. This study aimed to characterize and evaluate the counseling behavior and content by pharmacists and pharmacy assistants in a sample of outpatient pharmacies in a teaching hospital in Jordan. The study was conducted in 6 outpatient pharmacies at the participating hospital; Endocrinology, Cardiology, Respiratory, Pediatrics, Family Medicine and Emergency staff. The study consisted of observing 60 patient-pharmacist/assistant interactions behaviors and counseling content [if exists] in 6 different outpatient pharmacies at the participating hospital. Observations were conducted by a trained researcher using a pre-validated and piloted data collection form. Out of the 60 observed interactions, only 18 interactions involved patient counseling, the type of which was both verbal and written. The initiator of counseling in 44.4% of the cases was the patient. More than 2/3 [70.0%] of provided information to patients in all interactions was conducted using written labels only. The overall observed rate of counseling at the participating hospital pharmacies is low. There is a need to train pharmacists to offer more counseling to patients and have better communication and counseling skills.

## Critical Illness

### **How to deal with burden of critical illness: a comparison of strategies in different areas of China.**

Liu, Pengcheng; Jiang, Liwen; Li, Chengyue; Sun, Mei; Rieger, Alexander; Hao, Mo  
Fudan University - School of Public Health

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 659-663 (9 ref.)

**Keywords:** Cost of Illness; Insurance, Health; Insurance

**Abstract:** This article aims to introduce, compare and analyze the design and development of Critical Illness Insurance systems in different parts of China under different social and economic conditions, to explain their characteristics and similarities. It may provide references to other countries, especially developing countries, to solve the problem of high medical costs. According to the methods in Comparative Economics, 3 areas [Taicang in Jiangsu, Zhanjiang in Guangdong, Xunyi in Shanxi] which are in high, medium and low socio-economic condition respectively were chosen in China. Their critical illness insurance systems were analyzed in the study. Each system shares several common points, including coordinating urban and rural medical insurance fund, financing from the basic medical insurance surplus, and exploring payment reform and so on. But in the way of management, Taicang and Zhanjiang cooperate with commercial insurance agencies, but Xunyi chooses autonomous management by government. In Xunyi, multi-channel financing is relatively more dispersed, while funds of Taicang and Zhanjiang are mainly from the basic medical insurance surplus. The specific method of payment is different among these three areas. Because of the differences in economic development, population structure, and sources of funds, each area took their own mode on health policy orientation, financing, payment, coverage, and fund management to design their Critical Illness Insurance systems. This might provide references to other areas in China and other developing countries in the world.

## Cryopreservation

### Evaluation of ebselen supplementation on cryopreservation medium in human semen.

Naeini, Zohreh Khodayari; Bafrani, Hassan Hassani; Nikzad, Hossein  
Kashan University of Medical Sciences - Kashan Anatomical Sciences Research Center  
**IJRM-Iranian Journal of Reproductive Medicine** 2014; 12 (4): 249-256 (41 ref.)

**Keywords:** Azoles; Organoselenium Compounds; Semen; Antioxidants; DNA Fragmentation; Chromatin; Spermatozoa

**Abstract:** An effect of cryopreservation on human sperm is sublethal cryodamage, in which cell viability post-thaw is lost more rapidly at later times than in fresh cells. This study examined whether the addition of an antioxidant to cryopreservation medium could improve the post-thaw parameters and evaluation of sperm chromatin quality of cryopreserved human spermatozoa from men with normal semen parameters. Semen samples [n=35] were collected by masturbation and assessed following WHO standards. Individual samples were classified as two portions. One portion [n=10] was for elucidate the concentration of ebselen. Then the samples [n=25] were divided in to 5 groups. The first aliquot remained fresh. The second aliquots was mixed with cryopreservation medium. The third aliquots were mixed with cryopreservation medium containing solvent of ebselen. The fourth and fifth aliquots were mixed with cryopreservation medium containing 1.25 and 2.5 microm of ebselen. Samples were frozen and thawed samples were assessed for sperm parameters. Three-way ANOVA Multivariate measures were used to assess. According to this assessment the differences are observed in existent groups in post-thaw count, motility index, vitality staining, and morphology and DNA fragmentation. After freezing the media containing of ebselen, DNA fragmentation is significantly different in comparison with control group. ebselen with 1.25 microm dose was significantly associated with post-thaw DNA fragmentation [p=0.047]. Similarly ebselen with 2.5 microm dose was significantly associated with post-thaw DNA fragmentation [p=0.038]. But other parameters were not altered. These results suggest that the addition of ebselen to cryopreservation medium does not improve post-thaw parameters and DNA fragmentation of sperm.

## Cynara scolymus

### Life cycle assessment interpretation and improvement of the Sicilian artichokes production.

Lo Giudice, A.; Mbohwa, C.; Clasadonte, M.T.; Ingrao, C.

[E-mail:alogiudice@uj.ac.za](mailto:alogiudice@uj.ac.za)

University of Johannesburg - Faculty of Engineering and the Built Environment - Department of Quality and Operations Management

**International Journal of Environmental Research** 2014; 8 (2): 305-316 (28 ref.)

**Keywords:** Life Cycle Stages; Agriculture

**Abstract:** This paper presents the results obtained from the Life Cycle Assessment [LCA] of the production of Sicilian artichokes [*Cynara scolymus*] with the aim of reducing impacts, interpreting the results, suggesting possible improvements and enriching the sustainability knowledge already existing in the agro food field. Artichokes represent one of the excellent Italian agricultural products even if still not well-known and not appreciated despite their nutritional and functional quality. According to FAOSTAT [2013] data, Italy is the world leader in artichokes production, grown mainly in the central and southern regions of Italy, in particular in Sicily, Apulia and Sardinia. In particular, among all the Italian regions, Sicily, which is highly suited for this type of cultivation, is ranked first in terms of quantity produced: the reason for this lies in the excellent combination of climate and geological conformation of the soils. The study was conducted in accordance with the ISO standards 14040 and 14044 [2006], with the functional unit of 1 ha of land and, as the system boundaries being the phases of: pre-implantation preparation of the field; artichoke implantation; and harvesting. The most impacting phases are those related with the consumption of fuel and fertilizers as well as with the use of the PVC pipes for irrigation. Possible improvements could be the use of methanol instead of the naphtha [reduction of the total damage of about 13%] and the possibility of recycling the PVC pipes once the field is dismantled [furthermore reduction of the damage of about 3%].

## Cystine

### analogs and derivatives

### Liquid chromatography tandem mass/mass spectrometry for the quantification of fudosteine in human serum without precolumn derivatization.

Fan, Peng Cheng; Ren, Jun; Ma, Hui Ping; Jing, Lin Lin; Ma, Jun; Jia, Zheng Ping  
General Hospital of Lanzhou command of PLA - Department of Pharmacy

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 441-447 (11 ref.)

**Keywords:** Tandem Mass Spectrometry; Chromatography, High Pressure Liquid; Spectrometry, Mass, Electrospray Ionization

**Abstract:** A quantitative analysis method for fudosteine in human serum by high-performance liquid chromatography-electrospray ionization tandem mass spectrometry [HPLC-ESI/MS/MS] was established, which shows high sensitivity and selectivity. The mobile phase composition was 75% 20 mM acetic acid and 25% acetonitril, which was pumped at a flow rate of 0.40 mL/min. The overall chromatographic run time was approximately 7 min. The autosampler was set with an injection volume of 10 µL. The calibration curve was linear in the concentration range of 0.1-15.0 µg/mL. The coefficient of determination [r] was greater than 0.9998. This method has been fully validated and shown to be specific, accurate and precise. The method was simple, rapid and the sample preparation was minimal. It was successfully applied to the analysis of healthy volunteer.

## Cystinosis

### therapy

#### **Successful management of a neglected case of nephropathic cystinosis.**

El Naggari, Mohamed A.; Elnou, Ibtisam; Al Kindy, Hussein; Al Shahrabally, Aamir; Abdelmogheth, Anas A.

*E-mail: mnaggari@squ.edu.om*

Sultan Qaboos University Hospital - Department of Child Health

**SQUJ-Sultan Qaboos University Medical Journal** 2014; 14 (2): 231-234 (10 ref.)

**Keywords:** Neglected Diseases; Disease Management; Cysteamine-therapeutic use; Failure to Thrive; Positive-Pressure Respiration; Continuous Positive Airway Pressure; Intensive Care Units, Pediatric

**Abstract:** Cystinosis is a rare metabolic disorder characterised by lysosomal cystine accumulation leading to multi-organ damage; clinically, the kidneys are the first organ affected. Respiratory insufficiency caused by overall respiratory muscle myopathy is a life-threatening complication. Treatment with cysteamine should be initiated rapidly and continued lifelong to prolong renal function and protect the extra-renal organs. We report the case of a four-year-old Omani girl, diagnosed with infantile nephropathic cystinosis at 21 months. Cysteamine was prescribed but with no compliance to medications. She presented to the Child Health Department of Sultan Qaboos University Hospital, Oman, two years later with severe failure to thrive, electrolyte disturbance and respiratory failure. The hypoventilation and early respiratory dysfunction, due to intercostal and diaphragm myopathy, was treated by non-invasive positive-pressure ventilation. The patient was discharged after four months of intensive rehabilitation with no ventilator support. No standard treatment options have yet been established for respiratory dysfunction in cystinosis.

## Cytochrome P-450 CYP2C9

#### **Evaluation of CYP2C9 activity in rats: use of tolbutamide alone and in combined with bupropion.**

Qiu, Xiangjun; Song, Jijun; Yuan, Hongchang; Hou, Yi; Pan, Xiaofeng; Xu, Ren ai

Medical College of Henan University of Science and Technology

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 635-639 (16 ref.)

**Keywords:** Tolbutamide-pharmacology; Bupropion-pharmacology; Drug Interactions; Rats, Sprague-Dawley

**Abstract:** A [cocktail] of several probe drugs is often used to evaluate metabolic activity of multiple cytochrome P450 enzymes in one session. Some interactions among probe drugs can appear and may impact the rate of biotransformation of other ones. Our presented work was aimed on the influence of bupropion on cytochrome P450-mediated metabolism of tolbutamide. The biotransformation rates of tolbutamide administered either separately or in combined with bupropion were compared in this study. The results revealed that bupropion had no significant effect on tolbutamide hydroxylation. Thus, due to stability in cytochrome P450 enzyme metabolic activity in the case of combining of two model probe drugs the procedure can show to no extent differential results comparing to the single-marker use.

## Dental Caries

### epidemiology

#### **Prevalence of preschool caries among 6-year-old school children from different socioeconomic backgrounds in Amman, Jordan.**

Hamdan, Mahmoud A.; Kariem, Ghada A.; Abu Ghazaleh, Suha B.; Sonbol, Hawazen N.; Al Abdallah, Mariam; Rajab, Lamis D.

University of Jordan - Faculty of Dentistry - Department of Pediatric Dentistry and Orthodontics

**Jordan Medical Journal** 2013; 47 (3): 227-240 (39 ref.)

**Keywords:** Child, Preschool; Prevalence; Socioeconomic Factors; Schools; Oral Health; Cross-Sectional Studies

**Abstract:** The objectives of the present study were to describe the dental health status among 6-year-old schoolchildren in Amman, Jordan, and to investigate the association between selected sociodemographic, oral health behaviour and attitude variables and the presence of dental caries. A cross-sectional sample of 838 [Male = 436, Female = 402] children were examined in primary schools; the prevalence and severity of dental caries were measured using World Health Organization criteria. A two-stage cluster sampling technique was used. Sociodemographic factors and oral health behaviours and attitudes were assessed by a self-administered questionnaire. The prevalence of dental caries in the primary dentition was 41.6%. The mean number of decayed, missing and filled teeth [dmft] was 2.59 [SD=2.67]. The decayed component [d] constituted 67% of the total number of decayed, missing [19%] and filled teeth [14%]. The chi-square association test demonstrated that the variables: mother education and employment, type of dental care, type of school, tooth brushing, presence of dental plaque and family size were statistically significant in relation to the presence or absence of dental caries [P<0.05]. However, there was no significant difference between caries prevalence of children who attended private and public schools and those who had never been to a dentist. The caries experience was lower in females [dmft=2.51] than in males [dmft=2.68], but the difference was not statistically significant [P>0.05]. Moreover, there was no significant difference between the number of children who had dental plaque on their teeth and others who did not [P>0.05]. The present study showed that dental caries level was higher than that of children in industrialized countries and lower than that in children of the Middle Eastern Arab countries. However, the early caries development seen in children from the lower socio-economic classes reinforces the need for preventive programs. Dental caries can be largely prevented or controlled in its early stages of development by simple and relatively cheap methods of personal care, involving attention to general nutrition, diet and oral hygiene. Dental care information and oral hygiene instructions should be given as early as possible to the expectant mothers at prenatal counselling. Access to dental care must be improved to enable any preventive care to be implemented.

## Depressive Disorder, Major

### **Chronic medical conditions and major depressive disorder: differential role of positive religious coping among African Americans, Caribbean blacks and non-hispanic whites.**

Assari, Shervin

[E-mail:assari@umich.edu](mailto:assari@umich.edu)

University of Michigan School of Public Health - Center for Research on Ethnicity - Culture, and Health

**IJPM-International Journal of Preventive Medicine** 2014; 5 (4): 405-413 (58 ref.)

**Keywords:** Adaptation, Psychological; Religion; African Americans; Caribbean Region; Hispanic Americans; Cross-Sectional Studies; Ethnic Groups; Continental Population Groups; Chronic Disease

**Abstract:** This study was aimed to investigate the main and buffering effects of positive religious coping on the association between the number of chronic medical conditions and major depressive disorder [MDD] among African Americans, Caribbean Blacks and Non-Hispanic Whites. This cross-sectional study used data from the National Survey of American Life, 2001 and 2003. This study enrolled 3,570 African Americans, 1,438 Caribbean Blacks and 891 Non-Hispanic Whites. Number of chronic conditions and positive religious coping were independent variables, 12-month MDD was the outcome and socio-economic characteristics were controls. We fitted the following three ethnic-specific logistic regressions for data analysis. In Model I, we included the number of chronic conditions and controls. In Model II, we added the main effect of religious coping. In Model III, we included an interaction between religious coping and number of chronic conditions. Based on Model I, number of chronic conditions was associated with higher odds of 12-month MDD among all race/ethnic groups. Model II showed a significant and negative association between religious coping and MDD among Caribbean Blacks (odds ratio [OR] =0.55, 95% confidence Interval [CI] =0.39-0.77), but not African Americans or Hispanic Whites. Model III suggested that, only among Caribbean Blacks, the effect of chronic medical conditions on MDD is smaller in the presence of high positive religious coping [OR for interaction = 0.73, 95% CI = 0.55-0.96]. Although the association between multiple chronic conditions and MDD may exist regardless of race and ethnicity, race/ethnicity may shape how positive religious coping buffers this association. This finding sheds more light onto race and ethnic differences in protective effects of religiosity on mental health of populations.

## Diabetes Mellitus, Type 2

### **Correlation between microalbuminuria and hypertension in type 2 diabetic patients.**

Ali, Alia; Taj, Azeem; Amin, Muhammad Joher; Iqbal, Farrukh; Iqbal, Zafar

[E-mail:aliyaalihoney@yahoo.com](mailto:aliyaalihoney@yahoo.com)

Shaikh Zayed Postgraduate Medical Institute - Department of Medicine

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 511-514 (25 ref.)

**Keywords:** Albuminuria; Hypertension; Diabetic Nephropathies

**Abstract:** Hypertension is commonly found in patients with Diabetic Kidney Disease [DKD]. Microalbuminuria is the first clinical sign of involvement of kidneys in patients with type 2 diabetes. Uncontrolled hypertension induces a higher risk of cardiovascular events, including death, increasing proteinuria and progression to kidney disease. To determine the correlation between microalbuminuria and hypertension and their association with other risk factors in type 2 diabetic patients. One hundred and thirteen type 2 diabetic patients attending the diabetic clinic of Shaikh Zayed Postgraduate Medical Institute, Lahore, Pakistan were screened for microalbuminuria and raised blood pressure. The study was conducted from November 2012 to June 2013. Patients were divided into two groups. Group 1, those with

normoalbuminuria [n=63] and Group 2, those having microalbuminuria [n=50]. Group 2 patients showed higher blood pressure values as compared to Group 1. The results were statistically significant and showed poor glycemic control as a contributing risk factor. The study concluded that there is high frequency of hypertension among type 2 diabetics but still much higher among those having microalbuminuria. So, early recognition of renal dysfunction through detection of microalbuminuria and to start treatment without any delay will confer future protection from end stage renal disease as well as hypertension and its complications in type 2 diabetic patients.

## Diabetes, Gestational

### diagnosis

#### **Universal screening with glucose challenge test in detection of gestational diabetes.**

Akram, Nishat; Butt, Fauzia

Sharif Medical City Hospital - Sharif Medical and Dental College - Department of Obstetrics and Gynaecology

**Biomedica** 2014; 30 (1): 29-33 (18 ref.)

**Keywords:** Glucose Tolerance Test; Cross-Sectional Studies; Pregnancy

**Abstract:** To compare efficiency of glucose challenge test with oral glucose tolerance test for detection of gestational diabetes mellitus [GDM]. This observational cross sectional study was conducted in The Department of Obstetrics and Gynaecology, Sharif Medical and Dental College / Sharif Medical City Hospital, from December 2012 to June, 2013. Two consecutive pregnant ladies were included during this period between the gestational age group of 26 to 30 weeks by using convenient sampling technique after analysis of risk factors. All women undergo glucose challenge test [GCT] and glucose tolerance test [GTT]. Results of GCT were compared with glucose tolerance test as gold standard. Out of 1000 pregnant ladies, glucose challenge test screened 450 patients with positive results, and 550 patients with negative results. Out of 450 screened positive patients, oral glucose tolerance test [OGTT] detected 400 patients with true positive result and 50 patients with false positive results. Out of 550 screened negative patients of GCT, oral GTT detected 510 patients with true negative and forty patients with false negative results. So the sensitivity of GCT was 90.90%. Prevalence of gestational diabetes was 44%. Universal screening with glucose challenge test is a reliable cost effective and excellent screening test for gestational diabetes in low resource setting.

## Diabetic Nephropathies

#### **Comparative proteomics study of streptozotocin-induced diabetic nephropathy in rats kidneys transfected with adenovirus-mediated fibromodulin gene.**

Maleki, Akram; Ramazani, Ali; Foroutan, Maryam; Biglari, Alireza; Ranjzad, Parisa; Mellati, Ali Awsat

Zanjan University of Medical Sciences - Zanjan Metabolic Disease Research Center

**AJMB-Avicenna Journal of Medical Biotechnology** 2014; 6 (2): 104-112 (28 ref.)

**Keywords:** Proteomics; Streptozotocin; Diabetes Mellitus, Experimental; Rats, Sprague-Dawley; Kidney; Proteoglycans; Extracellular Matrix Proteins; Adenoviridae

**Abstract:** Transforming Growth Factor-beta [TGF-beta] activation appears to be crucial for tissue injury in Diabetic Nephropathy [DN]. Fibromodulin, the small leucine-rich proteoglycan, has been proposed to be the potent TGF-beta modulator. In this study, the therapeutic effects of fibromodulin in the kidneys of streptozotocin [STZ]-induced diabetic rats were investigated. Diabetic rats received intraperitoneal [IP] injections of recombinant adenovirus expression vectors [RAAd5] containing fibromodulin [RAAd- FMOD] and were killed after 10 weeks. Proteins were isolated from the rat kidney and separated using two-dimensional gel electrophoresis. The differentially expressed proteins were analyzed using Matrix-assisted laser desorption/ionization time-of-flight mass spectrometry [MALDI-TOF-MS]. Ten spots were identified using MALDI-TOF-MS. The identified proteins were primarily responsible for cell metabolism, cytoskeleton formation, and oxidative stress. RAAd- FMOD treatment markedly attenuated the albuminuria in diabetic rats. Taken together, these results provide a valuable clue in exploring the mechanism underlying the therapeutic effects of fibromodulin in diabetic nephropathy suggesting that it can be a potential agent in the treatment of this disease.

#### **Comparative study on renoprotective effect of aliskiren-pentoxifylline combination, valsartan and enalapril among patients with hypertension, type 2 diabetes mellitus and diabetic nephropathy.**

Hamed, Amin T.; Taha, Mohammed M.

Al-Azhar University - Faculty of Pharmacy - Department of Pharmacology

**Jordan Journal of Pharmaceutical Sciences** 2014; 7 (1): 1-14 (44 ref.)

**Keywords:** Amides; Fumarates; Pentoxifylline; Drug Combinations; Tetrazoles; Valine-analogs and derivatives; Enalapril; Hypertension; Diabetes Mellitus, Type 2; Protective Agents; Albuminuria; Prospective Studies

**Abstract:** This study was conducted to evaluate the renoprotective effect of aliskiren-pentoxifylline combination and compare it with enalapril and valsartan in patients with hypertension, type 2 diabetes mellitus and diabetic nephropathy [DN]. Sixty patients with hypertension, type 2 diabetes mellitus and microalbuminuria [20-200microg/min or 30-



300mg/24h] were selected from UNRWA and private clinics in Ga/a Strip and divided into three groups. The first group [n=20] was treated with enalapril [10-20mg/day], the second group [n=20] was treated with valsartan [160mg/day], whereas the third group [n=20] was treated with aliskiren-pentoxifylline combination [150,400mg/day]. All patients were followed-up for nine months by measuring serum creatinine level and urinary albumin excretion [UAE] rate before and at 3, 6 and 9 months of treatment. Paired T-test and independent T-test were used to analyze our results and the significance was tested at  $p < 0.05$ . The results showed a significant reduction in both UAE rate and serum creatinine level among patients who used aliskiren-pentoxifylline combination after 6 and 9 months of treatment, where the reduction was highly significant after 9 months of treatment [ $p=0.001$  for UAE,  $p=0.000$  for serum creatinine level]. In the valsartan treated group, the reduction in UAE rate was significant [ $p=0.045$ ] after 9 months of treatment, while no significant reduction was noticed in serum creatinine level [ $p=0.807$ ]. Moreover, no significant reduction was seen in UAE rate [ $p=0.125$ ] and serum creatinine level [ $p=0.445$ ] among patients who were given enalapril. In conclusion, aliskiren-pentoxifylline combination showed renoprotective effect more distinct than enalapril and valsartan among patients with DN.

## Diazinon

### Evaluation of residual diazinon and chlorpyrifos in children herbal medicines by headspace-SPME and GC-FID.

Mosaddegh, Mohammad Hossein; Emami, Fakhrossadat; Asghari, Gholamreza

[E-mail:mopbgmm3@yahoo.com](mailto:mopbgmm3@yahoo.com)

Yaid Shahid Sadoughi University of Medical Sciences - Medicine Faculty - Pharmacology and Toxicology Department

*IJPR-Iranian Journal of Pharmaceutical Research* 2014; 13 (2): 541-549 (31 ref.)

**Keywords:** Chlorpyrifos; Herbal Medicine; Solid Phase Microextraction; Child; Chromatography, Gas; Flame Ionization

**Abstract:** The oldest method for the managing of the illness is the use of medicinal plants. The use of herbal products as the first choice in self-treatment of minor conditions continues to expand rapidly across Iran. This makes the safety of herbal products an important public health issue. Pesticides are used widely in agriculture to increase the production by controlling the harmful insects and disease vectors, however it has some hazards on biological system of human especially children. The present study was designed to examine the residual amount of organophosphorus pesticides [Diazinon and Chlorpyrifos] in children herbal medicines available in the Iranian market. Five children herbal medicine liquid dosage forms were purchased from pharmacy store. They were extracted with SPME [Solid Phase Microextraction] using the PDMS-DVB fibre. Then the extracts were injected into a GC. The gas chromatograph was Younglin model YL 6100 equipped with a flame ionization detector. The column was Technokroma 60 m length, 0.53 mm internal diameter and 1.25 µm film coated. The presence and quantity of Diazinon and Chlorpyrifos were evaluated using their standard curves. Trace amounts of Chlorpyrifos and diazinon were detected in a few herbal medicines. Based on European pharmacopeia, threshold limits of Chlorpyrifos and diazinon residues for medicinal plant materials are 0.2 and 0.5 mg/Kg. respectively. Our analysis results showed that residue limits of these two pesticides in five children herbal medicines are ignorable.

## Doxorubicin

### pharmacology

#### Effect of doxorubicin on the histological structure of the liver in male albino rats.

Taher, Mohammed T.; Al Sammak, Maha A.; Al Qzazz, Maysoun M.

[E-mail:m-ldeen@yahoo.com](mailto:m-ldeen@yahoo.com)

University of Mosul - College of Medicine - Department of Anatomy and Histology

*Jordan Medical Journal* 2013; 47 (3): 220-226 (16 ref.)

**Keywords:** Liver-drug effects; Rats

**Abstract:** This study is concerned with the effect of doxorubicin on the histological structure of the rats livers. for this experiments 24 albino male rats [ranging from 200-220g] body weight and are three months age were taken. For this purpose three groups each consists of 8 male rats were examined. The animals were allowed to acclimatize to laboratory conditions one week prior to the experiments. Group I was left as a control, while group II received intraperitoneally a low dose of 0.2 mg /Kg doxorubicin, group III received the therapeutic dose of doxorubicin of 1mg /Kg intraperitoneally. Intraperitoneal injection of doxorubicin was given in the lower lateral part of the abdomen. The animals were scarified at the end of the experiment and the livers were collected from all groups to be prepared for light microscopic examination. Light microscopic observations revealed that higher doses of doxorubicin caused massive hepatotoxicity including dissolution of the hepatic cords, focal inflammation, apoptosis and necrosis of the hepatic tissues with fibrosis around the portal area. Lower doses exhibited abnormal changes including vacuolation of the hepatocytes with widening of the sinusoidal capillaries in addition to congestion and vasodilatation of the central veins. This study revealed that doxorubicin causes marked changes in rats liver; which occur even in low doses; such results can guide the design of appropriate treatment regimens to reduce the hepatotoxic effects of this anticancer drug such as the concomitant use of antioxidant drugs.

## Doxycycline

### pharmacology

#### Effects of doxycycline on Cx43 distribution and cardiac arrhythmia susceptibility of rats after myocardial infarction.

Fan, Xi zhen; Zhu, Hong jun; Wu, Xu; Yan, Ji; Xu, Jian; Wang, De guo  
Anhui Provincial Hospital - Department of Cardiology

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 613-621 (19 ref.)

**Keywords:** Connexin 43-pharmacology; Arrhythmias, Cardiac; Rats, Sprague-Dawley; Myocardial Infarction; Matrix Metalloproteinases

**Abstract:** This study aims to observe the effects of doxycycline [DOX] on gap junction remodeling after MI and the susceptibility of rats to cardiac arrhythmia. The proximal left anterior descending coronary artery of rats was ligated to establish a myocardial infarction animal model. DOX, methylprednisolone [MP], or vehicle was intraperitoneally injected into the animals for two weeks. Then, the heart size and heart function of all animals were determined through echocardiography. The experimental animals were sacrificed after the electrophysiologic study. Myocardial tissues were sampled to analyze the distribution of Cx43 using immunofluorescence; the Cx43 content was analyzed using western blot analysis; and the MMP-2 and MMP-9 activity in the myocardium was analyzed using gelatin zymography. The distribution of Cx43 in the border of the infarcted myocardia in the MI and MP groups was clearly disrupted and the Cx43 content was significantly reduced. In addition, the distribution of Cx43 in the border of the infarct in the DOX group was relatively regular, whereas two weeks of DOX treatment significantly inhibited MMP activity. Meanwhile, the induction rate of arrhythmia in the rats after DOX treatment was lower than those in the MI and MP groups. The results show that DOX treatment after myocardial infarction improves gap junction remodeling in the myocardial tissue near the infarcted area by inhibiting MMP activity and reducing susceptibility to cardiac arrhythmia.

## Drug Prescriptions

#### Prescription patterns of general practitioners in Peshawar, Pakistan.

Raza, Usman Ahmad; Khurshed, Tayyeba; Irfan, Muhammad; Abbas, Maryam; Irfan, Uma Maheswari

*E-mail: [usmanar@gmail.com](mailto:usmanar@gmail.com)*

Peshawar Medical College

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 462-465 (25 ref.)

**Keywords:** General Practitioners; Cross-Sectional Studies

**Abstract:** To find out prescription patterns of general practitioners in Peshawar. Cross-sectional survey of drug prescriptions was done at six major hospitals and pharmacies of Peshawar between April and May 2011. A total of 1097 prescriptions that included 3640 drugs, were analyzed to assess completeness, average number of drugs, prescription frequency of various drug classes, and number of brands prescribed. No prescription contained all essential components of a prescription. Legibility was poor in 58.5% prescriptions. Physician's name and registration number were not mentioned in 89% and 98.2% prescriptions respectively. Over 78% prescriptions did not have diagnosis or indication mentioned. Dosage, duration of use, signature of physician and directions for taking drugs were not written in 63.8%, 55.4%, 18.5% and 10.9% of prescriptions respectively. On average each prescription included 3.32 drugs. Most frequently prescribed drug classes included analgesics [61.7%], anti-infective agents [57.2%], multivitamins [37.8%] and gastrointestinal drugs [34.4%]. We found 206, 130, 105 and 101 different brands of anti-infective agents, gastrointestinal drugs, analgesics and multivitamins being prescribed. We observed a high number of average drugs per prescription mostly using brand names, and over-prescription of analgesics, antimicrobials, multivitamins and anti-ulcer drugs. Quality of written prescriptions was poor in terms of completeness.

## Dyslipidemias

### epidemiology

#### Prevalence of dyslipidemia in Iran: a systematic review and meta-analysis study.

Tabatabaei Malazy, Ozra; Qorbani, Mostafa; Samavat, Tahereh; Sharifi, Farshad; Larijani, Bagher; Fakhrazadeh, Hossein

Tehran University of Medical Sciences - Endocrinology and Metabolism Clinical Sciences Institute - Diabetes Research Center

**IJPM-International Journal of Preventive Medicine** 2014; 5 (4): 373-393 (78 ref.)

**Keywords:** Prevalence; Meta-Analysis as Topic; Cardiovascular Diseases; Hypercholesterolemia; Hypertriglyceridemia; Cholesterol, HDL; Cholesterol, LDL

**Abstract:** More than 80% cardiovascular disease [CVD] is preventable despite the fact that it is currently the ultimate cause of disability in the world. Assessment of the nationwide prevalence of dyslipidemia as a major CVD risk factor is essential to efficiently conduct prevention programs. We extracted data according to the cut-off points of dyslipidemia used in each study. All published papers on this topic in Iranian and international journals with affiliation of [Iran] were reviewed using standard keywords up to September 2011. We included all available population-based studies and national surveys conducted in individuals aged > 15 years. We excluded studies with < 300 individuals, non-population-based studies, or duplicated citations. We analyzed by random effect method due to between-study heterogeneity. The estimated prevalence and 95% confidence intervals in 29 eligible articles and one un-published data for hypercholesterolemia /= [>200 mg/dl], hypertriglyceridemia /= [>150 mg/dl], high levels of low density lipoprotein cholesterol [[LDL-C] /= [> 130 mg/dl]] and low levels of high density lipoprotein cholesterol [[HDL-C] <40 mg/dl in males, <50 mg/dl in females], in Iranian people were 41.6% [36.1-47.0], 46.0% [43.3-48.7], 35.5% [24.0-47.1] and 43.9% [33.4-54.4], respectively among both sexes and in both rural and urban areas. Hypercholesterolemia, high LDL-C and low HDL-C were more prevalent in women, whereas hypertriglyceridemia was more prevalent in men. All types of lipid component abnormalities were more prevalent in urban residents. Prevalence of dyslipidemia is considerable in Iran. It is necessary to enforce current measures of dyslipidemia control in the Iranian people to reduce CVD burden.

## Education, Medical

### Capacity utilisation in medical education.

Walsh, Kieran

[E-mail:kmwalsh@bmjgroup.com](mailto:E-mail:kmwalsh@bmjgroup.com)

BMJ Learning

**JCPSP-Journal of the College of Physicians and Surgeons Pakistan** 2014; 24 (5): 371-372 (4 ref.)

**Keywords:** Schools, Medical

**Abstract:** It is uncertain as to whether medical schools are operating to their maximum capacity or whether they could further maximise their capacity. It is also uncertain what problems medical schools might run into by striving to drive maximum capacity utilisation. Certainly there is no shortage of reports on why and how medical education providers should scale up, and yet there is inadequate scholarship on how medical education might do this in practice. It makes economic sense for medical schools to operate at maximum efficient capacity and yet adverse effects might result if schools are driven too hard. The main casualty of nearing the maximum efficient capacity is likely to be staff and staff morale. Staff will start to suffer from stress as a result of continually working to their limits. It is better to get buy-in from staff before implementing major changes that might increase capacity utilisation.

## Educational Measurement

### Assessment in higher education.

Khan, Junaid Sarfraz

University of Health Sciences - Department of Examinations

**Biomedica** 2014; 30 (1): 55-61 (8 ref.)

**Keywords:** Learning; Teaching; Education, Medical

**Abstract:** Assessment drives learning and influences the quality of learning by directing the approach students take towards learning and by aligning the outcomes of the educational program with teaching methodologies and the educational environment. Assessment needs to be recognized as a multidimensional entity and not a singular activity or concept that transcends across three domains cognitive, affective and psychomotor. Any assessment requires activation of and access to different cognitive, affective and psychomotor skills at multiple levels and their applications through a fusion in a multidimensional collusion of stored memories, learned knowledge and behaviour and acquired skills. Another dimension that requires consideration here is the context in which assessment takes place. Context of assessment can be defined in terms of the environment in which assessment takes place, its background, stakes as well as the stakeholders involved. New formats and mediums are being used in all areas of education both as a learning / teaching strategy as well as for assessment. Computerized, computer - aided or online teaching and learning have paved the way for computer - assisted - assessment techniques. Whether assessment is formative or summative, influences its design, approach and outcomes. To the administrator, the results of the assessment, either formative or summative, provide data that will help establish current policies or bring changes to them. To the program developers, the same results establish the worth of the program or otherwise. To the trainees, the scores or feedback help in understanding their deficiencies in relation to the clearly predefined goals and objectives of the educational program. The public places great emphasis on the native of assessment and the outcomes related to it since it is the public that is going to use the product of the medical education programs and confidence in the product will be related to their acceptability of the assessment and its outcomes. This paper identifies different formats of assessment and their contextual relevance.

## Eicosapentaenoic Acid

### chemistry

#### Formulation, characterization and optimization of liposomes containing eicosapentaenoic and docosahexaenoic acids; a methodology approach.

Hadian, Zahra; Sahari, Mohammad Ali; Moghimi, Hamid Reza; Barzegar, Mohsen  
Shahid Beheshti University of Medical Sciences - Faculty of Agriculture - Tarbiat Modares University and Academic Staff of National Nutrition and Food Technology Research Institute

*IJPR-Iranian Journal of Pharmaceutical Research* 2014; 13 (2): 393-404 (43 ref.)

**Keywords:** Docosahexaenoic Acids-chemistry; Liposomes; Chemistry, Pharmaceutical

**Abstract:** Omega-3 fatty acids [FAs] have been shown to prevent cardiovascular disease. The most commonly used omega-3 fatty acids like eicosapentaenoic acid [EPA] and docosahexaenoic acid [DHA] are highly vulnerable to oxidation and therefore, have short shelf life. Recent advances in nanoliposomes provided a biocompatible system for stabilizing omega-3 FAs. Several methods could be implemented to prepare nanoliposomes. To the best of our knowledge, the performances of these methods in preparation omega-3 FAs have not been examined. Nanoliposomes were prepared by thin film hydration followed by one of the following methods: 1- extrusion, ultrasonic irradiation; 2- bath sonication; 3- probe sonication; or 4- combined probe and bath sonication. The size of liposomes obtained from methods 1 to 4 were 99.7 +/- 3.5, 381.2 +/- 7.8, 90.1 +/- 2.3, and 87.1 +/- 4.10 nm with zeta potential being -42.4 +/- 1.7, -36.3 +/- 1.6, -43.8 +/- 2.4, and 31.6 +/- 1.9 mV, respectively. The encapsulation efficiency [EE] for DHA was 13.2 +/- 1.1%, 26.7 +/- 1.9%, 56.9 +/- 5.2% and 51.8 +/- 3.8% for methods 1 to 4, respectively. The corresponding levels for EPA were 6.5 +/- 1.3%, 18.1 +/- 2.3%, 38.6 +/- 1.8%, and 38 +/- 3.7%, respectively. The EE for DHA and EPA of liposomes for both methods 3 and 4 increased significantly [p<0.05]. Propanal, as the major volatile product formed during liposomal preparations, amounts from 81.2 +/- 4.1 to 118.8 +/- 2.3 microg/Kg. The differential scanning calorimetry [DSC] study showed that DHA and EPA influence the phase transition temperature of small unilamellar vesicles [SUVs] of dipalmitoyl phosphatidyl choline [DPPC]. Transmission electron microscopy [TEM] images of liposomes stained with uranyl acetate showed that the liposomes were spherical in shape and maintain high structural integrity. In conclusion, probe ultrasound of pre-formed liposomes facilitates significant loading of DHA and EPA into the nanoliposomal membrane.

## Elaeagnaceae

#### Removal of heavy metals Cr [VI], Cd [II] and Ni [II] from aqueous solution by bioadsorption of *Elaeagnus angustifolia*.

Amiri, M.J.; Fadaei, E.; Baghvand, A.; Ezadkhasty, Z.

*E-mail: Mjmiri@ut.ac.ir*

University of Tehran - Faculty of Environment - Department of Environmental Planning

*International Journal of Environmental Research* 2014; 8 (2): 411-420 (50 ref.)

**Keywords:** Metals, Heavy; Chromium; Cadmium; Nickel; Adsorption; Water Pollutants

**Abstract:** The problem of removing pollutants from water is an important process and is becoming more important with the increasing of industrial activities. One of the most important environmental problems is water resources pollution by Heavy metals. Bioadsorption is affordable adsorbents for the removal of heavy metals from aqueous solutions. This study explores the adsorption potential of Cr [VI], Cd [II] and Ni [II] by *Elaeagnus angustifolia* fruit powder in aqueous solution. The influences of several main parameters such as pH value of solution, sorbent amount, initial metal ion concentration, and contact time in batch experiments have been studied. The adsorption was depended on pH, adsorbent dosage, and contact time. Maximum removal of Cr [VI], Cd [II] and Ni [II] were obtained 7.19mg/g, 2.42 mg/g and 1.97 mg/g respectively. Adsorption isotherms were compared with both Langmuir and Freundlich adsorption models. The experimental data best fit with the Langmuir isotherm model. Experimental results show natural biosorbent was effective for the removal of pollutants from aqueous solution.

## Electrocoagulation

#### Electrocoagulation in a plugflow reactor: the treatment of cattle abattoir wastewater by iron rod anodes.

Eryuruk, K.; Tezcanun, U.; Ogutveren, U.Bakir

Sakarya University - Department of Environmental Engineering

*International Journal of Environmental Research* 2014; 8 (2): 461-468 (25 ref.)

**Keywords:** Cattle; Abattoirs; Waste Water; Electrodes; Iron

**Abstract:** The performance of a plug flow electrocoagulation reactor for the treatment of cattle abattoir [slaughterhouse] wastewater was investigated. A cylindrical iron reactor was operated as a cathode at a recycling batch mode while three iron rods located at the center of the reactor were used as an anode. The effects of different

parameters, including the current density, the supporting electrolyte dosage [Na<sub>2</sub>SO<sub>4</sub>], the wastewater recirculation rate, the initial pH and the polyelectrolyte addition were also evaluated. In order to achieve a high removal efficiency, the Electro-Fen ton process was also evaluated by adding H<sub>2</sub>O<sub>2</sub> of various concentrations. When the abattoir wastewater was subjected to the Electro-Fenton process, the best result regarding the removal of COD was obtained as 90% with an electrical energy consumption of 0.2 kWh/L. The experimental results reveal that the direct dischargeable effluent, according to Turkish legislation, was obtained in this study. In conclusion, the electrochemical reactor designed for this purpose is effective for the removal of COD from wastewater.

## Electronic Prescribing

### **Modeling of outpatient prescribing process in Iran: a gateway toward electronic prescribing system.**

Ahmadi, Maryam; Samadbeik, Mahnaz; Sadoughi, Farahnaz

Iran University of Medical Sciences - School of Health Management and Information Sciences - Department of Health Information Management

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 725-738 (79 ref.)

**Keywords:** Outpatients; Drug Prescriptions; Workflow

**Abstract:** Implementation of electronic prescribing system can overcome many problems of the paper prescribing system, and provide numerous opportunities of more effective and advantageous prescribing. Successful implementation of such a system requires complete and deep understanding of work content, human force, and workflow of paper prescribing. The current study was designed in order to model the current business process of outpatient prescribing in Iran and clarify different actions during this process. In order to describe the prescribing process and the system features in Iran, the methodology of business process modeling and analysis was used in the present study. The results of the process documentation were analyzed using a conceptual model of workflow elements and the technique of modeling [As-Is] business processes. Analysis of the current [as-is] prescribing process demonstrated that Iran stood at the first levels of sophistication in graduated levels of electronic prescribing, namely electronic prescription reference, and that there were problematic areas including bottlenecks, redundant and duplicated work, concentration of decision nodes, and communicative weaknesses among stakeholders of the process. Using information technology in some activities of medication prescription in Iran has not eliminated the dependence of the stakeholders on paper-based documents and prescriptions. Therefore, it is necessary to implement proper system programming in order to support change management and solve the problems in the existing prescribing process. To this end, a suitable basis should be provided for reorganization and improvement of the prescribing process for the future electronic systems.

## Electronic Waste

### **Determinants of WEEE recycling behaviour in Romania: a fuzzy approach.**

Colesca, S.E.; Ciocoiu, C.N.; Popescu, M.L.

[E-mail:sofiac@man.ase.ro](mailto:sofiac@man.ase.ro)

Academy of Economic Studies - Research Centre in Public Administration and Public Services

**International Journal of Environmental Research** 2014; 8 (2): 353-366 (48 ref.)

**Keywords:** Recycling; Fuzzy Logic; Environment; Environmental Pollution

**Abstract:** High levels of WEEE and limited capacities for disposal and recycling, together with the necessity to transpose the European legislation into national law have shaped the profile of WEEE system in Romania. In order to improve the functionality of this system it is important to understand the citizens' behaviour towards WEEE recycling. Recent research conducted in different countries suggest that various determinants, such as socio-economic and demographic factors, environmental knowledge, habits, convenience, motivations, can be used to analyse WEEE recycling behaviour. The results are contradictory and demonstrate that the peculiarities of each country have different influences on how people engage in WEEE collection and recycling. In the present paper, using hypotheses testing we have developed a WEEE recycling behaviour model for Romanians. It was assumed that socio-demographic factors and personal norms would predict WEEE recycling attitude and attitude, contextual forces, knowledge and recycling habits would influence WEEE recycling behaviour. The data, gathered using a survey, were processed using a fuzzy approach. The results showed that in the Romanian context the strongest determinants of WEEE recycling behaviour are people attitudes and habits. Moderate effects have recycling knowledge, pro-environmental norms and institutional support, while gender, income, perception of availability of collection points and regulations haven't any influence.

## Emergency Medicine

### Need for improvement of research culture in emergency medicine in Pakistan.

Shahid, Muhammad

[E-mail:mohd\\_shahid72@yahoo](mailto:mohd_shahid72@yahoo)

The Indus Hospital - Department of Emergency Medicin

**JCPSP-Journal of the College of Physicians and Surgeons Pakistan** 2014; 24 (5): 297-298 (4 ref.)

**Keywords:** Research

## Endometrial Neoplasms

### genetics

#### Overexpression of Her-2/neu oncogene in 51 cases of endometrial carcinoma.

Saeed, Mohammed S.; Ahmad, Abeer H.; Hassawi, Bashar A.J.

[E-mail:mohammed\\_sami72@yahoo.com](mailto:mohammed_sami72@yahoo.com)

University of Mosul - College of Medicine - Department of Pathology

**Jordan Medical Journal** 2013; 47 (3): 210-219 (37 ref.)

**Keywords:** Genes, erbB-2; Oncogenes; Cross-Sectional Studies; Retrospective Studies

**Abstract:** Endometrial cancer is a common malignancy of the female genital tract. Her-2 overexpression is strongly correlated with tumor grade, type, and stage and this association complicate the issue of response of Her-2 positive endometrial carcinoma to chemotherapy. The aims of the current study are; to estimate the overexpression of Her-2 in endometrial carcinoma in our patients, to correlate the results with other known clinicopathologic markers and to compare our results with others. This is a cross-sectional retrospective study of 51 cases of endometrial carcinoma collected with their clinical data from Al-Batool Teaching Hospital and Al-Khansa'a Maternity Teaching Hospital in Mosul-Iraq from January 2007 to January 2010. All cases were revised histologically. Forty-three cases were total abdominal hysterectomy and 8 were curetting material. Tumors were classified into two main types, endometrioid and non-endometrioid carcinomas. Immunoperoxidase stains for Her-2/neu were performed on representative formalin-fixed paraffin embedded blocks. Majority of the endometrial carcinoma were in the 6th decade [50.9%] with a mean of 56.5 year. Her-2/ neu overexpression was observed in 58.8% of cases. The most frequent association was with non-endometrioid carcinoma [100%]. Expression of Her-2/neu increased with increasing grade reaching 89.47% in grade III tumors. The highest expression was detected in tumors invading deep into the myometrium [77.77%]. HER-2/neu appears to play an important role in the biologic behavior of endometrial cancers. It was overexpressed in non-endometrioid carcinoma, especially papillary-serous type, high grade tumors, and among the higher stages. Therefore, targeted therapies directed against HER-2, could be effective in some patients with endometrial cancer.

## Endometrium

### drug effects

#### Effect of dexamethasone, insulin and EGF on the myogenic potential on human endometrial stem cell.

Tehrani, Hora Jalali; Parivar, Kazem; Ai, Jafar; Kajbafzaderf, Abdolmohammad; Rahbarghazi, Reza; Hashemi, Mehrdad; Sadeghizadeh, Majid

[E-mail:hoora\\_jalali@yahoo.com](mailto:hoora_jalali@yahoo.com)

Branch Islamic Azad University - Depatment of Biologic Science and Research

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 659-664 (25 ref.)

**Keywords:** Stem Cells-drug effects; Dexamethasone-pharmacology; Insulin-pharmacology; Epidermal Growth Factor-pharmacology; Myogenic Regulatory Factors; Cell Differentiation

**Abstract:** Human endometrium contains mesenchymal stem cells [eMSC] which have the ability to differentiate into three cell lineages and the potential in therapeutic applications. We hypothesize that using environmental induction in culture media such as dexamethasone. human recombinant insulin and human epidermal growth factor [hEGF] can differentiate endometrial stem cells into myoblast. These agents have a broad range of effects in myoblast differentiation in-vitro. We used immunohistochemistry analysis and RT -PCR to evaluate the presence of skeletal muscle - specific proteins some of which are expressed in the early stage of differentiation including myoD and Desmin which expressed at later stages of differentiation. In conclusion eMSC can differentiate in culture media which contains above mentioned factors and use for therapeutic purpose in muscular degenerative disease.

## Enterobacteriaceae

### Distribution and diversity of coliform bacteria in estuary of Jiahe river, China.

Li, J.; Wang, H.; Liu, Y.; Lin, M.; Liu, X.; Hu, X.

Chinese Academy of Sciences - Yantai Institute of Coastal Zone Research

**International Journal of Environmental Research** 2014; 8 (2): 501-508 (25 ref.)

**Keywords:** Escherichia coli; Citrobacter; Klebsiella; Estuaries; Rivers

**Abstract:** Waterborne outbreaks of pathogenic bacteria from contaminated water are serious threats for public health. Coliform bacteria have been regarded as one of the most important indicators for monitoring pathogenic bacteria. To address potential pathogenic bacterial outbreaks, the distribution and diversity of coliform bacteria in Jiahe river, which flows through densely-populated urban area in China, were detected. Escherichia Coli and other coliform bacteria were counted using the membrane filter technique to describe the distribution of the coliform bacteria. Phylogenetic analysis was applied to investigate the diversity of the coliform bacteria. The results suggested that the quantities of coliform bacteria varied greatly between five sampling sites with the highest value at site YT4 and the lowest value at site YT2. Highest concentrations of E. coli and other coliform bacteria were also observed at YT4, while the lowest value was detected at sites YT3 and YT2, respectively. Various coliform bacteria were classified by phylogenetic analysis, including Citrobacter, Klebsiella, Enterobacter, and Raoultella. Components of coliform bacteria affiliated into these four genera were various in all sampling sites. The statistical analysis suggested that the distribution of coliform bacteria were remarkably influenced by total bacteria amount. Multiple environmental parameters were proved to affect the diversity of coliform bacteria. The results of this study revealed the correlation between coliform bacteria and the environmental parameters, which is important for predicting and preventing waterborne transmission of pathogenic bacteria.

## Epididymitis

### Chronic scrotal pain caused by mild epididymitis: report of a series of 44 cases.

Lai, Yongqing; Yu, Zuhu; Shi, Bentao; Ni, Liangchao; Liu, Yunchu; Yang, Shangqj

[E-mail:yqlord@163.com](mailto:E-mail:yqlord@163.com)

Institute of Urology of Shenzhen PKU-HKUST Medical Center - Peking University Shenzhen Hospital - Department of Urology

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 638-641 (10 ref.)

**Keywords:** Scrotum; Pain; Chronic Disease

**Abstract:** Patients with idiopathic chronic scrotal pain are challenging to both the general practitioner and urologist. In this study, we tried to recognize mild epididymitis as an underrecognized cause of idiopathic chronic scrotal pain. We described a consecutive series of 44 patients with idiopathic chronic scrotal pain characterized by mild scrotal pain, mild to moderate tenderness of epididymis without abnormal swelling of epididymis. We obtained a detailed history and physical examination along with routine urinalysis and Doppler ultrasound to identify the characteristics of this new clinical entity. A consecutive series of 44 patients who were primarily diagnosed as [idiopathic chronic scrotal pain] came to our hospital. All had the sign of mild to moderate tenderness on the affected epididymis without epididymis enlargement. Doppler ultrasound showed the affected epididymis with normal size and no abnormal change. We treated them with antibiotics orally along with cessation of strenuous activity and all fully recovered from scrotal pain. In this study, we recognized mild epididymitis as an underrecognized cause of idiopathic chronic scrotal pain. It was characterized by mild scrotal pain, mild to moderate tenderness of epididymis without abnormal enlargement of epididymis.

## Epilepsy

### Primary school managers' knowledge of and attitude towards epilepsy among children in Erbil city, Iraq.

Abdulla, Salih A.

[E-mail:d.salih@yahoo.com](mailto:E-mail:d.salih@yahoo.com)

Hawler Medical University - Department of Nursing

**SQUMJ-Sultan Qaboos University Medical Journal** 2014; 14 (2): 204-208 (15 ref.)

**Keywords:** Health Knowledge, Attitudes, Practice; Schools; Child; Cross-Sectional Studies; Questionnaires

**Abstract:** This study aimed to determine the knowledge and attitudes of primary school managers regarding epilepsy among school children in Erbil City, Iraq. A cross-sectional study was conducted in primary schools between 18 June and 18 August 2013. A total of 80 primary school managers were selected to answer a questionnaire covering three domains: socio-demographical characteristics, knowledge of epilepsy and attitudes towards epilepsy. More than half of the participants [55%] had spent less than 10 years in school administration. More than one-third [37.5%] of the participants believed that epilepsy was an infectious disease, and over half of the respondents [53.75%] stated that epilepsy cannot be treated or prevented. Although the respondents' attitudes towards pupils with epilepsy were generally positive, their knowledge of epilepsy was imperfect; thus, an epilepsy education campaign is required. This should focus on the causes of epilepsy and its management.

## Erythrocytes

### **Pseudopyropoikilocytosis leading to spurious results.**

Al Riyami, Arwa Z.; Al Farsi, Khalil; Al Shehhi, Ibrahim; Al Khabori, Murtadha; Al Huneini, Mohammed; Davis, Heidi  
*E-mail: arwa@squ.edu.om*

Sultan Qaboos University Hospital - Department of Haematology

**SQUMJ-Sultan Qaboos University Medical Journal** 2014; 14 (2): 245-246 (4 ref.)

**Keywords:** Blood Cell Count; Thrombocytosis; Elliptocytosis, Hereditary

## Evidence-Based Dentistry

### **Knowledge and use of evidence-based dentistry among Iranian dentists.**

Navabi, Nader; Shahravan, Arash; Pourmonajem, Sepideh; Hashemipour, Maryam A.

*E-mail: m\_s\_hashemipour@yahoo.com*

Kerman University of Medical Sciences - Oral and Dental Diseases Research Center - Department of Oral Medicine

**SQUMJ-Sultan Qaboos University Medical Journal** 2014; 14 (2): 209-216 (50 ref.)

**Keywords:** Knowledge; Dentists; Cross-Sectional Studies; Questionnaires

**Abstract:** The objective of this study was to assess the knowledge and use of evidence-based dentistry [EBD] among Iranian dentists. A cross-sectional survey was conducted by means of a questionnaire among dentists attending the 52<sup>nd</sup> National Annual Congress of the Iranian Dental Association in Tehran in April 2012. The questions covered the participants' level of knowledge and use of EBD. The mean knowledge score of the 310 respondents was 3.66 +/- 1.19 out of a maximum of 5. The majority of the dentists had little [56.1%] or no [20.7%] knowledge of EBD. The main reported barrier to the use of EBD was lack of time [44.1% of respondents] with 42.8% of dentists using the Internet less than one hour per week. EBD was not a familiar concept to these Iranian dentists; the majority of them preferred consultation with colleagues over seeking evidence from electronic databases.

## Ferula

### **Anti-viral evaluation of sesquiterpene coumarins from *Ferula assa-foetida* against HSV-1.**

Ghannadi, Alireza; Fattahian, Khadijeh; Shokohinia, Yalda; Behbahani, Mandana; Shahnoush, Alireza

Isfahan University of Medical Sciences - School of Pharmacy and Pharmaceutical Sciences - Isfahan Pharmaceutical Sciences Research Center

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 523-530 (36 ref.)

**Keywords:** Coumarins; Sesquiterpenes; Herpesvirus 1, Human; Antiviral Agents

**Abstract:** Several complications attributed with Herpes virus related infections and the emergence of drug resistant viruses prompt scientists to search for new drugs. Several terpenoids and coumarins have shown and HSV effects while no sesquiterpene coumarins have been previously tested for HSV treatment. Three sesquiterpene coumarins badrakemin acetate [1], kellerin [2] and samarcandin diastereomer [3] were isolated from the gum resin of *Ferula assa-foetida*, a herbal medicine with antimicrobial, antiprotozoal and antiviral effects. Compounds were identified by ID and 2D- NMR spectroscopies and comparison with literature data. A comparative evaluation of cytotoxicity and antiviral activity showed that kellerin [2] could significantly inhibit the cytopathic effects and reduce the viral titre of the herpes virus type 1 [HSV-1] DNA viral strain KOS at concentrations of 10.5 and 2.5 microg/mL.

## Fetal Membranes, Premature Rupture

### **Maternal morbidity and perinatal outcome in preterm premature rupture of membranes before 37 weeks gestation.**

Dars, Saira; Malik, Safia; Samreen, Irum; Kazi, Roshan Ara

*E-mail: sairadars.gull@gmail.com*

Liaquat University Hospital Hyderabad - Department of Obstetrics and Gynaecology

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 626-629 (24 ref.)

**Keywords:** Morbidity; Perinatology; Mothers

**Abstract:** To assess the maternal morbidity and perinatal outcome in pre-term pre mature rupture of membranes between 24 to 37 weeks gestation. This observational study was carried out in Gynaecology and Obstetrics Unit -1, at University Hospital Hyderabad, from October 2010 to October 2011. It included one hundred patients admitted through the outpatient department, as well as from casualty department of University Hospital Hyderabad. Detailed Clinical examination of the patient was done. Systemic review was also done to see any co-morbidity. All patients had laboratory investigations. Inclusion criteria were all patients gestational age between 24 to 37 weeks with preterm premature rupture of membrane [PPROM] confirmed by ultrasound and clinical examination regardless of their age.



Exclusion criteria were patients with congenital anomalies, multiple pregnancy, pre-eclampsia and eclampsia, diabetes mellitus, polyhydramnios intrauterine growth restriction and placenta abruption. Data was collected using a proforma. Detailed workup including history, general physical examination, abdomen and pelvic examination and relevant specific investigations were noted. Out of 100 patients included in this study Primigravida were 17% and multigravida 83%. There was wide variation of age ranging from a minimum of 20 to > 40 years. The mean age was 30+ 3.1 years. Mostly patients belonged to the poor class in 72% cases followed by middle class in 21% and upper class 7%. Analysis shows that out of 100 mothers 26% had PROM of < 24 hrs duration and 74% had > 24 hrs of duration. Maternal outcome in 16 cases of Preterm Premature Rupture of Membrane findings revealed septicemia in 12% cases and Chorioamnionitis in 12% cases. Fetal outcome in 27 cases of preterm premature rupture of membrane revealed prematurity in 5% cases, fetal distress in 4% cases, cord compression in 5% cases, necrotizing enterocolitis in 2% cases, hypoxia in 9% cases and pulmonary hypoplasia in 2% cases. Low socioeconomic status is associated with increased neonatal morbidity due to fetal distress, cord compression, necrotizing enterocolitis, hypoxia and pulmonary hypoplasia at the time of delivery. An appropriate and accurate diagnosis of PROM is critical to optimize pregnancy outcome. It is suggested that the timely diagnosis and management of preterm PROM will allow obstetric care providers to optimize perinatal outcome and minimize neonatal morbidity.

## diagnosis

### Predictive value of aspartate aminotransferase and alanine aminotransferase levels in vaginal fluid for the diagnosis of premature rupture of membranes.

Asgharnia, Maryam; Mirblouk, Fariba; Salamat, Fatemeh; Ashrafkhani, Babak; Dirbaz, Zahra  
Gulian University of Medical Sciences - Reproductive Health Research Center - Department of Obstetrics and Gynecology

*IJRM-Iranian Journal of Reproductive Medicine* 2014; 12 (4): 269-274 (14 ref.)

**Keywords:** Aspartate Aminotransferases-diagnostic use; Alanine Transaminase-diagnostic use; Pregnancy

**Abstract:** Preterm premature rupture of membranes [PPROM] occurs in 3% of pregnancies and 30-40% of preterm labors are related to this problem. Early diagnosis of PPRM is very important due to its impact on pregnancy outcomes. To determine the diagnostic value of aspartate aminotransferase [AST] and alanine aminotransferase [ALT] levels in vaginal fluid for the diagnosis of preterm premature rupture of membranes as a non-invasive and available test. A total of 148 pregnant women between the 26th-36th gestational weeks were enrolled in the study. 74 patients were in PROM group and 74 in control group. AST and ALT levels in vaginal fluid were measured in each group. Mann Whitney U-test was used to compare AST and ALT levels in each group. The mean of AST level in vaginal fluid was 12.77 +/- 10.06 in PROM group vs. 6.91 +/- 10.92 in control group [p<0.001], while there were no significant difference between ALT levels in PROM group 1.51 +/- 3.17 and control group 0.89 +/- 1.15 [p=0.49]. Optimal cut point of AST for the diagnosis of PROM was 4.5 IU/L in this study. The sensitivity, specificity, positive and negative predictive values were 82.4%, 63.5%, 69.32% and 78.33% respectively. According to the findings of this study, measurement of AST level in vaginal fluid can be used as a reliable test for diagnosis of PROM, but there is no good cut point for ALT level that can be practically used.

## Fibroma

### surgery

#### Bilateral elastofibroma dorsi synchronic or sequential surgery?

El Hammoumi, Massine; Hentour, Siham; Kabiri, El Hassane

*E-mail:hamoumimassine@hotmail.fr*

Mohammed V University Souissi - Faculty of Medicine - Mohammed V. Military Teaching Hospital

*SQUMJ-Sultan Qaboos University Medical Journal* 2014; 14 (2): 247-248 (5 ref.)

**Keywords:** Scapula; Magnetic Resonance Imaging; Tomography, X-Ray Computed

## Folic Acid Deficiency

### Knowledge, attitude and practice regarding folic acid deficiency; A hidden hunger.

Hisam, Aliya; Ur Rahman, Mahmood; Mashhadi, Syed Fawad

*E-mail:aaleya@yahoo.com*

National University of Science and Technology [MUST] - Army Medical College - Lecturer in Community Medicine Depart

*Pakistan Journal of Medical Sciences* 2014; 30 (3): 583-588 (20 ref.)

**Keywords:** Health Knowledge, Attitudes, Practice; Cross-Sectional Studies; Questionnaires

**Abstract:** To find the Knowledge Attitude and Practice regarding Folic Acid Deficiency among Women of Child Bearing Age [WPCBA]. To find out the Association of Education Level with Practice of Folic Acid in WPCBA. A Descriptive cross sectional study [Knowledge Practice and Attitude] was conducted at Military Hospital and Combined Hospital Rawalpindi from September 2012 to February 2013. About 400 married females of age group 21-42 years were included by convenient sampling technique. After taking informed verbal consent, a closed ended interviewer administered questionnaire was filled. Data was entered and analyzed using SPSS version 20. Mean age of the respondents was 30.31 +/- 5.280 years, illiterate and literate were 165 [41.25%] and 235 [58.75%] respectively. The knowledge regarding folic acid need was 172 [43%]. Only 161 [40.25%] thought that folic acid deficiency in pregnant women results in abnormality in newborn. In pregnancy, 205 [51.25%] had received folic acid supplementation. Association between education level and practice of folic acid was significant [ $p= 0.009$ ] at 95% confidence level, Knowledge regarding folic acid deficiency among WOCBA was low along with the poor attitude. Practice was also not satisfactory. Education status plays important role in preventing micronutrient deficiency.

## Forests

### **A diachronic classification of peri-urban forest land based on vulnerability to desertification.**

Salvati, L.; Tombolini, I.

*E-mail: luca.salvati@entecra.it*

Centre for the Study of Soil-Plant Interactions [CRA-RPS] - Consiglioper la Ricerca e la sperimentazione in Agricoltura  
**International Journal of Environmental Research** 2014; 8 (2): 279-284 (23 ref.)

**Keywords:** Urban Population; Conservation of Natural Resources; Mediterranean Region; Ecosystem; Environment

**Abstract:** Land vulnerable to desertification increased in the Mediterranean basin since World War II due to several interacting factors including climate variations, land-use changes and growing human pressure. It was hypothesized that the increase in the level of land vulnerability is not distributed homogeneously over time and space while impacting preferentially landscapes surrounding large urban agglomerations. This hypothesis was tested diachronically [1960-2010] in the peri-urban area of Rome [Central Italy] to clarify how different factors causing land vulnerability to desertification impact a fragile landscape close to the city with one of the largest coastal forest in Italy. Four partial indicators [climate quality, soil quality, vegetation quality, land management quality] developed within the Environmentally Sensitive Area [ESA] framework and measuring the level of land vulnerability have been calculated at a detailed spatial scale. The highest growth rate in land vulnerability has been observed in cropland while coastal woodlands showed a relatively high and stable land quality over time. Conservation strategies of relict forest ecosystems considered as 'buffer zones' contrasting land degradation processes are particularly important in Mediterranean peri-urban regions.

## Galactans

### **The study of guar gum and starch on disintegration time and drug release of fast dissolving tablet in rabbit using single dose randomized parallel design method.**

Rambabu, Sharma; Ranawat, M.S.; Anil, Bhandari; Dinesh, Puri

*E-mail: sharmaram77@gmail.com*

Jodhpur National University - Faculty of Pharmaceutical Sciences

**Jordan Journal of Pharmaceutical Sciences** 2013; 6 (3): 280-291 (16 ref.)

**Keywords:** Mannans; Plant Gums; Starch; Drug Liberation; Tablets; Rabbits; Tryptamines; Oxazolidinones

**Abstract:** The aim of this study is to find the effect of starch and guar gum 4000 on disintegrating time and dissolution behavior of drug Zolmitriptan from fast dissolving tablet [FDT]. The FDT was prepared by direct compression method. The precompression parameters were evaluated with subjected to angle of repose, bulk and tapped density, hausnefs ratio and Carr's index and all were within limit. The prepared tablets were evaluated for thickness, uniformity of content, hardness, friability, wetting time and in vitro disintegration time and in vivo release of drug. The in vitro release and assay of drug was performance by UV spectrophotometer. The in vivo study reveals that when guar gum [5%] and starch [10%] were used in formulation, the plasma concentration of drug was increased because, it disintegrate tablet rapidly and drug was released rapidly from dosage form and reach quickly in to systemic circulation resultant bioavailability is increased.

## Gastric Mucosa

### drug effects

#### Effects of combined treatment with aspirin and diclofenac or indomethacin on the gastric mucosa of the rat [reduced damage by proton pump inhibitors]

Al Bustami, Faraj

[E-mail:Fbustami@ju.edu.jo](mailto:Fbustami@ju.edu.jo)

The University of Jordan - Faculty of Medicine

**Jordan Medical Journal** 2013; 47 (4): 316-330 (33 ref.)

**Keywords:** Aspirin; Diclofenac; Indomethacin; Proton Pump Inhibitors; Rats, Wistar; Omeprazole

**Abstract:** To investigate the gastric mucosal injury caused by the combined treatment of aspirin and other non-steroidal anti-inflammatory drugs [NSAIDs] and to identify the optimum methods to avoid such injury. Sixty albino Wistar rats of 200-250gm were used in this study. The animals were divided into 8 groups. Group I served as control and received the vehicle of the used drugs [aspirin, diclofenac and indomethacin]. Groups II, III, and IV received single daily dose of aspirin [4mg/kg body weight], diclofenac [2mg/kg. body weight] and indomethacin [2mg/kg body weight] respectively. Group V received aspirin and diclofenac and Group VI received aspirin and indomethacin as above. Group VII and VIII received omeprazole (2mg/kg body weight) one hour before ingestion of aspirin and diclofenac or aspirin and indomethacin as above. At the end of treatment, lesions in the stomach were evaluated macroscopically and microscopically. Macroscopic analysis showed that treatment with aspirin, diclofenac and indomethacin separately induced multiple gastric mucosal lesions which were larger and deeper following the combined treatment of aspirin and either diclofenac or indomethacin. Microscopically the lesions include increased mucous production, oedema, congestion, necrosis and hemorrhage of the fundic mucosa. After the administration of omeprazole [proton pump inhibitor] most of the mucosal lesions show evidence of partial healing. Combined treatment with aspirin and diclofenac or indomethacin produced larger and deeper gastric fundic mucosal lesion than aspirin treatment alone. Omeprazole ingestion added to the above drugs significantly healed lesions compared to the control group by 75% and 70% [p=0.05].

## Gastrointestinal Agents

#### Utilization profile of gastrointestinal medications among the critically ill patients of a tertiary care hospital.

Lisha J., John; Padmini D., Devi; Shoba, Guido

[E-mail:driishaj@yahoo.com](mailto:driishaj@yahoo.com)

Gulf Medical University - Lecturer, Department of Pharmacology

**Jordan Journal of Pharmaceutical Sciences** 2013; 6 (3): 299-307 (29 ref.)

**Keywords:** Critical Illness; Tertiary Care Centers; Peptic Ulcer; Drug Utilization; Inpatients; Intensive Care Units; Prospective Studies

**Abstract:** Pharmacotherapy in critically ill is complicated by altered physiology, presence of multi organ system failure and utilization of multiple medications. The present study assessed the utilization pattern of gastrointestinal drugs among the inpatients of the intensive care unit. This prospective study was carried out in medical intensive care unit [ICU] of a tertiary care hospital. Case records of all inpatients of ICU were reviewed over a period of 12 months. The demographic data, clinical data, and drug details were recorded. Descriptive statistics was carried out. values are expressed as percentage, mean + SD and range. Of the 728 inpatients, a total of 695 patients received gastrointestinal drugs. Male to female ratio was 1:9. The mean age was 49.21 +/- 15.84 years with a range of 18-90 years. Drugs for gastrointestinal system and drug metabolism [ATC-A] [23.3%] were most commonly utilized drug class of all the drugs prescribed in the ICU. Among the anti-peptic ulcer agents, pantoprazole [A02BC02] [87%] and ranitidine [A02BA02] [9.7%] were the frequently prescribed drugs. Metoclopramide [A03FA01] [19.5%] was the most frequent prokinetic agent and ondansetron [A04AA01] [15%] anti-emetic agents. Lactulose [A06AD11] [11.7%] was the most common laxative given while Glycopyrrolate [A03BA01][6.3%] most frequent anti-secretory agent prescribed. Gastrointestinal drugs were the widely prescribed drug class among the critically ill prescribed both as prophylactic as well as therapeutic indications. Proton pump inhibitors were the acid suppressant therapy of choice, which require revision based on its recent findings on safety and efficacy in critically ill.

## Gastrointestinal Hemorrhage

### surgery

#### Management of upper gastrointestinal bleeding from portal hypertension: Elective or emergency surgery?

Liu, Sen

[E-mail:liuss2013@yeah.net](mailto:liuss2013@yeah.net)

Tianjin 4th Centre Hospital - Department of General surgery

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 574-577 (12 ref.)

**Keywords:** Upper Gastrointestinal Tract; Hypertension, Portal; Elective Surgical Procedures; Emergencies; Retrospective Studies; Splenectomy; Postoperative Complications; Length of Stay; Disease Management

**Abstract:** To evaluate the clinical outcome of emergency and elective operation of splenectomy with periesophagogastric devascularization in treating upper gastrointestinal hemorrhage resulted from portal hypertension. We retrospectively reviewed 219 patients of upper gastrointestinal hemorrhage resulted from portal hypertension treated using emergency or elective operation between Jul 2002 and Aug 2010. The clinical data were collected and analyzed. In the group of elective operation, four patients with grade B and three with grade C died, and in the group of emergency operation, two patients with Grade B and four with Grade C died. The Grade C patients treated using emergency operation presented with a higher mortality than those treated using elective operation, but no significant difference was found [ $p > 0.05$ ]. In the two groups, no patients with Grade A died. 17 cases [11.1%] suffered from complications in the group of elective operation and 11 cases [16.7%] in emergency operation [ $p > 0.05$ ]. The complication rate in patients with Grade C is significantly higher than that in patients with Grade A or B in each group [ $p < 0.05$ ]. The hospital stay and cost in group of elective operation are significantly higher than those in group of emergency operation [ $p < 0.05$ ]. The patients with Grade A or B treated using emergency operation have similar clinical outcomes as those treated using elective operation, but emergency operation may result in higher rate of death and complication in patients with Grade C.

## Glomerular Filtration Rate

#### Advances in glomerular filtration rate estimation.

Rabbani, Malik A.

[E-mail:anasrabbani@yahoo.com](mailto:anasrabbani@yahoo.com)

Queen's Hospital - Burton Hospital NHS Foundation Trust, Burton upon Trent

**SQUMJ-Sultan Qaboos University Medical Journal** 2014; 14 (2): 138-140 (15 ref.)

**Keywords:** Kidney Diseases; Creatinine-blood

#### Comparison between three different equations for the estimation of glomerular filtration rate in Omani patients with type 2 diabetes mellitus.

Al Maqbali, Salima R.S.; Mula Abed, Waad Allah S.

[E-mail:almog96@yahoo.com](mailto:almog96@yahoo.com)

Sohar Hospital - Department of Laboratory Medicine

**SQUMJ-Sultan Qaboos University Medical Journal** 2014; 14 (2): 183-189 (28 ref.)

**Keywords:** Diabetes Mellitus, Type 2; Food Habits; Renal Insufficiency, Chronic; Cooperative Behavior; Epidemiology; Kidney Function Tests; Creatinine-blood; Retrospective Studies

**Abstract:** Estimated glomerular filtration rate [eGFR] is an important component of a patient's renal function profile. The Modification of Diet in Renal Disease [MDRD] equation and the Chronic Kidney Disease-Epidemiology Collaboration [CKD-EPI] equation are both commonly used. The aim of this study was to compare the performance of the original MDRD[186], revised MDRD[175] and CKD-EPI equations in calculating eGFR in type 2 diabetes mellitus [T2DM] patients in Oman. The study included 607 T2DM patients [275 males and 332 females, mean age  $\pm$  standard deviation 56  $\pm$  12 years] who visited primary health centres in Muscat, Oman, during 2011 and whose renal function was assessed based on serum creatinine measurements. The eGFR was calculated using the three equations and the patients were classified based on chronic kidney disease [CKD] stages according to the National Kidney Foundation Kidney Disease Outcomes Quality Initiative guidelines. A performance comparison was undertaken using the weighted kappa test. The median eGFR [mL/min/1.73 m<sup>2</sup>] was 92.9 for MDRD[186], 87.4 for MDRD[175] and 93.7 for CKD-EPI. The prevalence of CKD stage 1 was 55.4%, 44.7% and 57% while for stages 2 and 3 it was 43.2%, 54% and 41.8%, based on MDRD[186], MDRD[175] and CKD-EPI, respectively. The agreement between MDRD[186] and CKD-EPI [K 0.868] was stronger than MDRD[186] and MDRD[175] [K 0.753] and MDRD[175] and CKD-EPI [K 0.730]. The performances of MDRD[186] and CKD-EPI were comparable. Considering that CKD-EPI-based eGFR is known to be close to isotopically measured GFR, the use of MDRD[186] rather than MDRD[175] may be recommended.

## Goiter

### Effects of iodine deficiency goiter on academic performance of girls.

Mushtaq, Robina; Ramzan, Musarat; Bibi, Anwar  
Wah Medical College - Department of Community Medicine

**Biomedica** 2014; 30 (1): 40-43 (15 ref.)

**Keywords:** Iodine-deficiency; Questionnaires; Schools; Sodium Chloride, Dietary

**Abstract:** Iodine is an essential micronutrient and is essential in minute amounts for the normal physical and mental growth, development and well being of all humans. The objective of this study was to determine the effects of iodine deficiency Goiter on academic performance of girls and to compare these effects between Grade I and Grade II goiter. The study was conducted in different schools of Wah Cantt and Abbottabad from 1[st] February 2011 to 30[th] June 2011. This is a descriptive / School based observational study. To assess the effects of iodine deficiency Goiter on academic performance of girls, 300 girls [10-19 years of age] were interviewed. A pre-tested closed ended questionnaire was designed. Different variables were included in the questionnaire regarding the subject. Results were summed and statistically analyzed using SPSS 10.0. Of the total number of girls interviewed 38 percent belong to 10 - 14 years and 62 percent belong to 15 - 19 years age group. In 18% subjects goiter was present since birth, 23% were having goiter for the last 5-10 years, while in 59% girls the duration of illness was less than 5 years. Academic performance was poor in 11%, satisfactory in 49%, good in 30% and excellent in only 2%. School attendance was poor in 18%, satisfactory in 34%, good in 34% and excellent in only 6%. The main reasons for absence from school were continuous illness and lack of self interest. It can be concluded from our study that iodine deficiency Goiter can affect the academic performance of girls. The academic performance was better among girls with Grade I goiter as compare to girls with Grade II. Academic performance of girls, with duration of illness < 5 years, was better as compared to those who were having goiter for longer than 5 years because cognitive functions deteriorate with increasing duration of illness. Emphasis should be on health education regarding the use of iodized salt to prevent iodine deficiency Goiter.

## Granuloma, Giant Cell

### diagnosis

#### Giant cell granuloma of the maxillary sinus; a case report.

Al Layla, Abdul Monem; Mahafza, Tareq

[E-mail:tmahafza@ju.edu.jo](mailto:tmahafza@ju.edu.jo)

Jordan University Hospital - Department of ENT

**Jordan Medical Journal** 2013; 47 (3): 260-265 (20 ref.)

**Keywords:** Maxillary Sinus-pathology

**Abstract:** World Health Organization has classified Central giant cell Granuloma [CGCG] as a rarely aggressive idiopathic benign intraosseous lesion that occurs almost exclusively in the jaws. It occurs most frequently in young women [aged <30 y]. Hereby we present a rare case of CGCG in a 28 years old female.

## Groundwater

### Management tools for sustainable ground water protection in mega urban areas - small scale land use and ground water vulnerability analyses in Guangzhou, China.

Baier, K.; Schmitz, K.S.; Azzam, R.; Strohschon, R.

Department of Engineering Geology and Hydrogeology

**International Journal of Environmental Research** 2014; 8 (2): 249-262 (42 ref.)

**Keywords:** Urban Population; Conservation of Natural Resources; Water

**Abstract:** In developing and newly industrialized countries, population growth and migration contribute immensely to the development of megacities and mega urban areas. In most cases, the rapid development of cities has far-reaching consequences for the ecosystem in general and the hydrological cycle in particular. The developments in China within the last decades show an interesting, but complex setting. Massive and rapidly occurring land use changes in the economically booming South-Chinese Pearl River Delta result in rising hazards and risks for the urban water resources and often in a severe deterioration of water quality. The quantity and quality of local groundwater sources is, however, much less investigated than the situation of the surface waters. In order to supporting a better protection of the urban groundwater resources, the aims of this article are to analyze the vulnerability of the groundwater and the potential hazards and risks for groundwater resulting from land use changes - taking Guangzhou as a case study area.

## Health Services Research

### **Project monitoring and evaluation: an enhancing method for health research system management.**

Djalalinia, Shirin; Owlia, Parviz; Malekafzali, Hossein; Ghanei, Mostafa; Babamahmoodi, Abdolreza; Peykari, Nilofar  
Ministry of Health and Medical Education - Deputy of Research and Technology - Development of Research and Technology Center

**IJPM-International Journal of Preventive Medicine** 2014; 5 (4): 505-510 (22 ref.)

**Keywords:** Evaluation Studies as Topic; Research

**Abstract:** Planning, organizing, staffing, leading and monitoring are the basic functional component of management. In present article, we aim to define the project monitoring and evaluation in health research system [HRS] considering its success and challenges based on our national experience. In this study based on the information of annual Medical Science Universities evaluation during the last decade the HRS indicators have been scored in three axes based on HRS functions: Stewardship, capacity building and knowledge production. In this article, we will focus on the results of HRS evaluation from 2002 to 2010, also on its success and challenges. In an overall view, the main results are the experiences of the designing and implantation of such process after pre-project preparation, all parts followed under the whole supervision of the aims of the HRS evaluation. Project management light the way of practical application of knowledge, skills, tools and techniques for better HRS evaluation and management. We concluded that; although monitoring and evaluation as an essential part of HRS Management light the improvement ahead way but we still need to advantage of the new project management advances.

## Hearing Aids

### **The clinical implications of ear canal debris in hearing aid users.**

Orji, Foster Tochukwu; Onyero, Emmanuel O.; Agbo, Christian Ejiofor

[E-mail:tochiorji@yahoo.com](mailto:E-mail:tochiorji@yahoo.com)

University of Nigeria Teaching Hospital Enugu - Department of Otolaryngology

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 483-487 (13 ref.)

**Keywords:** Ear Canal; Bacteria; Staphylococcus aureus; Pseudomonas aeruginosa; Proteus

**Abstract:** The ear irritations suffered by hearing aid [HA] users are yet to be related to the clinical state of canal. We undertook this study to examine the nature of debris and the microbial flora of ears of hearing aid users, as well as evaluate the determinant factors of ear irritation in this population. An observational clinical study was carried out involving 32 unilateral hearing aid users recruited from ENT clinic of a tertiary referral center. Each subject underwent otoscopic assessment of canal debris and microbial analysis of swab cultures taken from the hearing aid-wearing ear and contralateral normal ear without hearing aid. Canal debris [wax [28%], fungal deposits [19%], bacteria exudates [13%]], as well as microorganisms were identified in significant number of ears with hearing aids than ears without hearing aid [P = 0.003 and P = 0.006 respectively]. Coagulase-negative staphylococci were the commonest identified bacteria. Others were Staphylococcus aureus, Pseudomonas aeruginosa, and Proteus species. Intolerable irritations of hearing aid wearing ears were significantly associated with bacterial and fungal otitis externa, and ear discharge [P = 0.005, 0.02, 0.03 respectively]. This study demonstrates that using hearing aid alters the ear canal flora; increases risk of both fungal and bacterial otitis externa, as well as encourage wax debris formation, with resultant ear irritations. To ensure compliance their ears should periodically be attended to, by de-waxing or given topical antimicrobial agents where indicated.

## Hearing Loss, Noise-Induced

### **Self assessment of hearing quality and noise-related attitudes among traffic policemen of Patiala, India.**

Gupta, Sharat; Mittal, Shalju; Kumar, Avnish; Singh, Kamal Dev

[E-mail:sharatgupta29@yahoo.co.in](mailto:E-mail:sharatgupta29@yahoo.co.in)

Gian Sagar Medical College - Department of Physiology

**IJPM-International Journal of Preventive Medicine** 2014; 5 (4): 511-515 (19 ref.)

**Keywords:** Police; Noise; Self-Assessment; Hearing; Attitude; Health Knowledge, Attitudes, Practice; Questionnaires; Tinnitus

**Abstract:** The study was conducted on a group of 90 traffic policemen aged 20-50 years and working in and around Patiala district to assess their knowledge, attitude, and practices toward the ill effects caused by traffic noise on health. The subjects were required to fill up a questionnaire regarding their self-assessment of hearing ability, noise-related attitudes, and the use of personal protective equipment such as earplugs. The mean age of subjects was 39.8 +/- 5.80 years, while the mean duration of exposure to traffic noise was 10.56 +/- 6.43 years. Only 5.5% subjects felt that their hearing was below average. As many as 61% subjects had work-related tinnitus. It was observed that none of them had ever used ear plugs, mainly due to their non availability. The self-assessment of hearing by traffic policemen indicated that most of them had normal hearing. However, to find out the exact number of cases with hearing impairment, further evaluation with audiometry is recommended in them.

## Heart Defects, Congenital

### **Postoperative nosocomial infections among children with congenital heart disease.**

Zhang, Jian; Yuan, Yan; Li, Peiling; Wang, Tuanjie; Gao, Jun; Yao, Jinhua; Li, Shujun  
The First Affiliated Hospital of Xinxiang Medical University - Department of Neurology

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 554-557 (16 ref.)

**Keywords:** Cross Infection; Postoperative Complications; Child; Risk Factors; Staphylococcus epidermidis; Staphylococcus aureus; Enterococcus; Pseudomonas aeruginosa; Candida albicans

**Abstract:** To study the pathogen distribution, antimicrobial susceptibility and risk factors of postoperative nosocomial infections among children with congenital heart disease. Three hundreds children with congenital heart disease admitted to our hospital to receive surgeries from February 2010 to February 2013 were selected. A total of 120 children were tested as positive by sputum culture, with the infection rate of 40.0%. The top five most common pathogenic microorganisms included Staphylococcus epidermidis, Staphylococcus aureus, Enterococcus, Pseudomonas aeruginosa, and Candida albicans. S. epidermidis, S. aureus and Enterococcus were highly resistant to penicillin, azithromycin and erythromycin, moderately susceptible to levofloxacin and cefazolin, and completely susceptible to vancomycin. Multivariate Logistic regression analysis showed that hospitalization stay length, combined use of antibiotics, systemic use of hormones, mechanical ventilation and catheter indwelling were the independent risk factors of postoperative nosocomial infections [P < 0.05]. Nosocomial infection, which was the most frequent postoperative complication of pediatric congenital heart disease, was predominantly induced by Gram-positive bacteria that were highly susceptible to cephalosporins and vancomycin. Particular attention should be paid to decrease relevant risk factors to improve the prognosis.

## Hemangioma, Cavernous, Central Nervous System

### **epidemiology**

### **Cerebral cavernomas: radiological prevalence and clinical features in a 10 year retrospective study in a teaching hospital.**

Dahbour, Said S.; Al Najjar, Mahasen S.; Alarini, Mahmoud Y.; Tarawneh, Emad S.; Hadidy, Azmy M.

*E-mail: saiddahbour@hotmail.com*

Jordan University Hospital - Division of Neurology - Department of Internal Medicine

**Jordan Medical Journal** 2013; 47 (3): 253-259 (11 ref.)

**Keywords:** Hemangioma, Cavernous, Central Nervous System-radiography; Prevalence; Retrospective Studies; Hospitals, Teaching; Magnetic Resonance Imaging

**Abstract:** Cerebral cavernous angiomas remain one of the most negotiable and controversial topics in neurological and neurosurgical practice. It can present with symptoms or can be found incidentally. The aim of this study is to evaluate the prevalence, clinical presentation, treatment options and outcome of patients with cerebral cavernoma.: Brain MRI for [14372] patients done in our university teaching hospital during 10 -year period from 2001 to 2011 were reviewed, 33 cases of cerebral cavernoma were found. The medical charts of these patients were reviewed and analyzed for their clinical presentation, treatment options and outcome. We identified 33 cases of cavernoma with a mean age of 33 +/- 16.8% years. There were 18 females and 15 males. Four cases were excluded from analysis [but included in prevalence calculation] due to unavailability of clinical data. In the 29 other cases there were 35 cavernomas. The radiologic prevalence of cavernomas in this population was 0.23%. Most cavernomas were found in the supratentorial regions mostly found in the frontal lobes. The most common presenting symptoms were seizures in males and headache in females. The radiologic prevalence of cerebral cavernomas was less than previous series, while clinical presentation was the same. Performing MRI at higher resolution and field strength with more sensitive sequences may lead to the detection of subtle or small brain abnormalities that would not have been detected previously.

## Hemoptysis

### **Is atmospheric pressure change an independent risk factor for hemoptysis?**

Araz, Omer; Ucar, Elif Yilmazel; Akgun, Metin; Aydin, Yener; Meral, Mehmet; Saglam, Leyla; Kaynar, Hasan; Gorguner, Ali Metin

*E-mail: dromeraraz@gmail.com*

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 595-600 (25 ref.)

**Keywords:** Atmospheric Pressure; Risk Factors; Humidity; Temperature

**Abstract:** Hemoptysis is one of the most important and challenging symptoms in pulmonary medicine, Because of the increased number of patients with hemoptysis in certain periods of the year, we aimed to investigate whether atmospheric changes have an effect on the development of hemoptysis with or without a secondary cause. The data of patients presenting with hemoptysis between January 2006 and December 2011 were analyzed. Data on the daily

atmospheric pressure [hectopascal, hPa], relative humidity, [%] and temperature [°C] during that time were obtained. A total of 232 patients with hemoptysis, 145 male [62.5%] and 87 female [37.5%] with an average age of 48.1 [+/- 17.6], were admitted to our hospital between 2006 and 2011. The highest admission rates were in the spring season, the highest in May [n=37, 15.9%], and the lowest admission rates were in December [n=10, 4.3%]. A statistically significant negative correlation was found between the number of hemoptysis cases and mean atmospheric pressure but no relative humidity or outdoor temperature. Hemoptysis is very much influenced by weather factors; in particular, low atmospheric pressures significantly affect the development of hemoptysis. Fluctuations in atmospheric pressure may also play a role in hemoptysis.

## Hepatitis B

### prevention and control

#### Knowledge and practice regarding prevention of hepatitis B among non-gazetted staff of tertiary care teaching hospital in private sector, Lahore.

Raider, Abida; Sheikh, Naheed Humayun; Farooq, Fariha  
AkhtarSaeed Teaching Hospital - Akhtar Saeed Medical and Dental College - Department of Community Medicine

**Biomedica** 2014; 30 (1): 8-11 (4 ref.)

**Keywords:** Health Knowledge, Attitudes, Practice; Tertiary Care Centers; Hospitals, Teaching; Private Sector; Cross-Sectional Studies

**Abstract:** A descriptive and cross sectional study was conducted among non-gazetted staff of a Tertiary Care Hospital in Lahore from January 2012 to July 2012. The objective was to assess the level of knowledge and practice regarding prevention of Hepatitis B and explore the gaps between knowledge and actual practice for disease prevention. A sample of fifty six non-gazetted staff [appointed 3 months earlier on regular basis] was taken through systematic random sampling. A pre-tested structured questionnaire was used after taking verbal consent from the respondents. Out of total fifty six, 26 [46.4%] were females. The mean age was 27.45 +/- 08.41 years and 34 [60.7%] were having income / capita / month < Rs. 3000. Good knowledge regarding this viral disease was present in 30 [53.6%] respondents. But 47 [83.9%] were well informed that disease spreads through blood transfusion and from person to person. Also 48 [85.7%] were aware that needle stick injury can lead to disease transmission. Knowledge of disease transmitting sexually was positive among 44 [78.6%] respondents and through unhygienic dental procedure was positive among 45 [80.4%] respondents. Regarding practices 25 [44.6%] had full course of immunization and 53 [94.6%] were properly disposing off used needles and 31 [55.4%] were insisting on change of razors at barber's shop. It was also observed that 38 [67.9%] respondents were using gloves before handling the instruments and 28 [50%] got accidental needle prick in last calendar year. Out of total fifty six, 46 [82.14%] had satisfactory / good knowledge. However paramedics as compared to auxiliary staff showed good knowledge [P-value = .0036] and also good practice [P-value = .0031]. These significant statistics of the hospital staff are very encouraging, as they revealed satisfactory / good knowledge [82.14%] satisfactory / good practice [69.94%], the gap of 12.50% can be overcome by continuous awareness campaigns by hospital authorities. However full course of immunization doesn't depend on income / capita / month [P-value - 0.0602] and on gender [P-value - 0.775]. The present study concludes that there is a gap between knowledge and practices among non-gazetted staff. Repeated awareness sessions should be launched to overcome this gap and subsidized full immunization package should be provided at recruitment time to hospital non-gazetted staff.

## Hepatitis C

#### Association of hepatitis C virus infection and interleukin-28B gene polymorphism in Chinese children.

Wu, Rong Rong; Liu, Feng Qun; Zhu, Shi Shu; Han, Jin  
Beijing 302 Hospital - Department of Pharmacy

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 519-524 (25 ref.)

**Keywords:** Interleukins; Polymorphism, Genetic; Polymorphism, Single Nucleotide; Hepatitis C, Chronic; Child

**Abstract:** To preliminarily explore the association of rs12979860 and rs8099917 SNPs with chronic HCV infection in Chinese Man children. Chronic HCV infection patients [n=277; 1-17 years old, 4.5 years old in average] and healthy subjects [n=150, children; 2-17 years old, 5.2 years old in average] were recruited and tested by PCR combining direct sequencing. The differences between the rs12979860 and rs8099917 genotypes in patients and healthy subjects were compared. The genetic variations at rs12979860 and rs8099917 in chronic hepatitis C [CMC] children and healthy subjects did not differ significantly. The frequency of spontaneous clearance in CMC children was higher [47%], which is related to the genetic variations. The histological changes of patients were more significant compared to their clinical and biochemical indices, but they did not correlate with the genetic mutations at rs12979860 and rs8099917 significantly. The rs12979860 and rs8099917 SNPs are independent factors predicting the spontaneous clearance of Chinese CMC children patients. The correlation between diseases outcomes are in need of further study.



## epidemiology

### Hepatitis C among young male offenders admitted to the central Jail, Lahore.

Nafees, Muhammad; Shahbaz, Tazeem; Ali, Saghir A.; Butt, Farooq B.

Punjab Institute of Mental Health - Rashid Latif Medical College - Department of Pathology

**Biomedica** 2014; 30 (1): 5-7 (23 ref.)

**Keywords:** Criminals; Adolescent; Incidence; Cross-Sectional Studies

**Abstract:** This study was designed to observe intraprisn incidence of hepatitis C virus [HCV] infection among young offenders admitted to the Central Jail, Lahore. The evaluation was made incidence among 728 young inmates [aged 16 - 30 years] at the Central Jail, Lahore, between June 2009 and November 2009. Screening for Anti-HCV antibodies was performed on immunochromatographic devices and all positive and borderline cases were retested with ELISA system. Among 728 participants, 129 demonstrated serologic evidence of HCV infection. Frequency was calculated 17.7%. The study indicates that HCV infection is highly prevalent among young male offenders and highlights the need to deliver awareness, prevention, and medical management to make them a healthy and useful citizen.

## Hernia, Ventral

### surgery

### Complications in laparoscopic and open mesh repair of ventral hernias in a tertiary care hospital.

Kiani, M. Ali; Razzaq, Zeeshan; Afzal, M.

Rawalpindi and Community Medicine Islamabad Medical and Dental College - Holy Family Hospital - Department of Surgery

**Biomedica** 2014; 30 (1): 12-16 (18 ref.)

**Keywords:** Laparoscopy-adverse effects; Surgical Mesh-adverse effects; Pain, Postoperative; Postoperative Complications; Length of Stay; Tertiary Care Centers; Prospective Studies

**Abstract:** Ventral hernias are defects in the abdominal wall. They are normally classified by aetiology and location. The main reason of ventral hernias can be prior surgery [incisional] or spontaneously [umbilical, epigastric, spigelian, or lumbar hernias]. Ventral hernia repair is one of the most common operations performed by general surgeons. The purpose of this study was to compare the complications rate, post-operative pain, hospital stay and time to return to normal activity in laparoscopic and open mesh repair of ventral hernias. The study was conducted from October, 2010 to February, 2011 in surgery department Holy Family Hospital, Rawalpindi. In this randomised clinical trial a total of 160 patients were selected by taking approval from hospital ethical committee and informed written consent from each patient. The admitted patients for elective surgical repair of ventral hernia were randomly allocated to Group A [laparoscopy] and B [open repair] including 80 patients in each group. Information regarding study parameters was recorded on a predesigned perffonna. The mean age in laparoscopic group was 41.20 +/- 5.44 years and in open repair group it was 43.32 +/- 4.31 years. In laparoscopic group there were 61 females [76.25%] and in open mesh repair group there were 63 [78.75%] females. The post-operative pain was significantly [p-value = 0.000] less in laparoscopic group [3.59 + 1.58] as compared to open repair group [5.49 +/- 1.59]. The mean hospital stay was also significantly greater in open mesh repair group [31 +/- 5.8 vs. 39 +/- 7.36, p-value = 0.001]. The time to resume work activities for the laparoscopic group was significantly [p-value = 0.046] shorter [median, 21.0 days; inter-quartile range, 24 days] compared with that for the open repair group [32.5 days; 36 days]. There was significantly greater complication rate in open mesh repair group [48.75% vs 33.4%, p-value = 0.032] as compared to laparoscopic group. Intra-operative complications were noted higher in laparoscopic group as compared to open mesh repair group. The laparoscopic management of ventral hernia repair has less post-operative pain, less complications, shorter hospital stay and shorter time of return to normal activity work.

## Hospitals

### Can hospital promotional activities be more ethical?

Chen, Yiyi; Yin, Zhou; Xie, Qiong; Shao, Zhixin

Zhejiang University - College of Medicine - The First Affiliated Hospital

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 656-658 (5 ref.)

**Keywords:** Health Promotion; Ethics; Ethics, Professional; Ethics, Medical

**Abstract:** At present, there exist a lot of violations of medical ethics in advertising and promotional activities, which have been infringing the rights of patients. Therefore, the ethical criteria should be established as soon as possible to regulate the hospital promotional activities, to regain the trust of people.

## Hydrocarbons, Chlorinated

### Levels of organochlorine pesticide residues in water and sediment from selected agricultural sectors of Kanyakumaridistrict, Tamil Nadu, India.

Jeyakumar, T.; Kalaiarasi, I.; Rajavel, A.; Anbu, M.; Kumar, R.

[E-mail:jekeyq@yahoo.com](mailto:jekeyq@yahoo.com)

Annamalai University - Faculty of Engineering and Technology - Chemistry Section

**International Journal of Environmental Research** 2014; 8 (2): 493-500 (30 ref.)

**Keywords:** Pesticide Residues; Pesticides; Water; Agriculture; DDT; Lindane

**Abstract:** The levels of 19 organochlorine pesticides [OCPs] in surface water and under water sediments from tanks located nearby the prime agricultural areas of Kanyakumari district, Tamil Nadu, India were investigated to evaluate their pollution risks. A total of 36 surface water samples at 9 sampling sites and 27 sediment samples at 9 sampling stations were collected from tanks, which were the water sources for cultivation. The total OCPs concentration in surface water and sediments were 5.68-25.12 ng/L and 17.7-58.59 ng/g dry weight [dw], respectively. Among the OCPs, hexachlorocyclohexanes [HCHs], dichlorodiphenyltrichloroethane [DDTs] and heptachlor epoxide were the most dominant compounds in the sediment as well as surface water. The dominant OCPs in sediment and water were beta-HCH in HCHs, p,p-DDD in DDTs and heptachlor epoxide in other OCPs. Distribution of HCHs, DDTs and other OCPs were different indicating their different sources. Composition analysis in sediments indicated a recent usage of lindane.

## Hypoglycemic Agents

### pharmacokinetics

### Bioequivalence comparison of two formulations of fixed-dose combination glimepiride/metformin [2/500 mg]tablets in healthy volunteers.

Jung, Sang hoon; Chae, Jung woo; Song, Byung jeong; Kwon, Kwang il

Chungnam National University - College of Pharmacy

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 365-371 (30 ref.)

**Keywords:** Sulfonylurea Compounds-pharmacokinetics; Metformin-pharmacokinetics; Therapeutic Equivalency; Chemistry, Pharmaceutical; Drug Combinations; Double-Blind Method; Tablets; Volunteers

**Abstract:** Glimepiride/metformin [2/500 mg] is an oral antihyperglycemic agent for the treatment of type 2 diabetes. A generic glimepiride/metformin [2/500 mg] fixed-dose combination [FDC] tablet was developed recently. This study was designed to collect data for submission to Korean regulatory authorities to allow the marketing of the test formulation. We evaluated the comparative bioavailability and tolerability of the test and reference formulations in healthy male adult volunteers. This single-dose, randomized, double-blind, two-way crossover trial was conducted at Bestian Medical Center in Bucheon, Korea. In total, 40 male Korean volunteers were enrolled. The subjects were randomized to receive an FDC tablet containing the glimepiride/metformin [2/500 mg] test or reference formulation, and pharmacokinetic [PK] parameters were measured. After a 1-week washout period, the other formulation was administered and the PK parameters were measured again. The C<sub>[max]</sub> and AUC (were determined from blood samples obtained at 0, 0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4, 5, 6, 8, 12, and 24 h after drug administration. Bioequivalence was considered established if the 90% CIs of the geometric mean ratios [GMRs] of the test-to-reference formulations for C<sub>[max]</sub> and AUC<sub>[t]</sub> were within the predetermined regulatory range of 80-125%. In total, 40 healthy male subjects were enrolled and completed the study [mean [SD] age, 23.2[2.26] years [range, 19-30 years]; weight, 68.95[8.30] Kg [range, 52.0-87.0 Kg]; and height, 175.4[5.34] cm [range, 164-189 cm]]. The GMRs [90% CI] of the glimepiride C<sub>[max]</sub> and AUC were 1.006[0.947-1.069] and 1.010[0.953-1.071], respectively. For metformin, the values were 1.019[0.959-1.083] and 1.035[0.989-1.084], respectively. The test and reference formulations had similar PK parameters. The test formulation of glimepiride/metformin [2/500 mg] FDC tablets met the Korean regulatory criteria for bioequivalence.

## Hypospadias

### surgery

### Effect of double layer dartos flap in reduction of fistula rate post hypospadias repair.

Suoub, Mohammed; Sawaqed, Fadi; Al Khitan, Sayel

[E-mail:Dr\\_Suoub@yahoo.com](mailto:Dr_Suoub@yahoo.com)

Mu'tah University - Faculty of medicine - Department of Special surgery

**Jordan Medical Journal** 2013; 47 (4): 293-297 (17 ref.)

**Keywords:** Fistula; Surgical Flaps; Retrospective Studies; Surgical Procedures, Operative

**Abstract:** To assess the impact of double layer dartos flap on urethro-cutaneous fistula rate reduction and to compare it with single layer dartos flap in Tubularized Incised Plate Urethroplasty [TIPU] for hypospadias in children. Between January 2008 and month 2011 retrospective charts review for 120 patients who had hypospadias repair by the author. 26 patients were excluded from the study because they were not suitable for TIPU procedure. Therefore, our study sample involved 94 children. Mean age at time of surgery was 16 months [10-96 months], with a mean follow up of 18.2 months [10-36 months]. All patients had hypospadias repair by utilizing TIPU. Patients were divided into two groups: Group one involved 50 patients had double layer dartos flap. Group two involved 44 patients had single-layer dartos flap. All patients had stent insertion at the time of repair. 6/44 patients [13.6%] developed fistula in group two and 2/50 patients [4%] in group one had fistula. Dartos coverage appears to have significant effect in reducing urethro-cutaneous fistula in TIPU repair. With double layer dartos coverage further reduction can be achieved.

## Hysterectomy

### Indications for a hysterectomy at Jordan university hospital; a teaching hospital experience.

Saleh, S. S.; Fram, K.; Sumrein, I.

[E-mail:sssaleh@hotmail.com](mailto:sssaleh@hotmail.com)

Jordan University Hospital - Department of obstetrics and gynaecology

**Jordan Medical Journal** 2013; 47 (3): 201-209 (56 ref.)

**Keywords:** Hospitals, University; Hospitals, Teaching; Retrospective Studies; Leiomyoma; Uterine Neoplasms; Adenomyosis; Menorrhagia

**Abstract:** The indications for hysterectomy have changed due to the introduction of many alternatives. However, it is still the most common major gynecological operation. Therefore, this study was conducted to study the indications for a hysterectomy in a teaching hospital. This is a retrospective study analyzing the indications for hysterectomy in a teaching hospital over a period of two years [2008-2009]. In total, 148 hysterectomies were analyzed. The case notes of these patients were reviewed. The mean age was 46.6 year. Bleeding disorders, uterine fibroids, and abdominal pain were the most frequent indications accounting for 68%. Only 15% were performed due to malignant or premalignant conditions. The final histopathology reports revealed that the most common finding in the uterine specimens was fibroid, which was reported in 50 patients [33.78%], followed by adenomyosis which was reported in 38 patients [25.68%]. About 90% of our hysterectomies were carried out through an abdominal route and 10% by the vaginal route. We reported no major complication that endanger the life of the patient as most of the complications were the usual minor postoperative ones ranging from wound infection in 9% to fever and abdominal pain in 1%. The vast majority of hysterectomies were performed to relieve the symptoms of pain, bleeding, or both which means that the indication can be summarized due to discomfort and inconvenience rather than threaten life. It is very clear that age has an important influence on the relative frequency of the indications which are flexible rather than absolute.

## Indomethacin

### chemistry

### Preparation, characterization and in vitro evaluation of indomethacin loaded solid lipid nanoparticles.

Abu Amara, HEND M.

[E-mail:hndm99@yahoo.com](mailto:hndm99@yahoo.com)

Al Azhar University of Gaza - Department of Pharmaceutics and Industrial Pharmacy

**Jordan Journal of Pharmaceutical Sciences** 2014; 7 (1): 15-36 (60 ref.)

**Keywords:** Lipids; Nanoparticles; Nanostructures

**Abstract:** Solid lipid nanoparticles [SLNs] and nano structured lipid carriers [NLCs] containing or not containing indomethacin [IND] were prepared with either Cetyl palmitate, Geleol[tm] or Compritol 888 ATO as a lipid phase. In all systems the surfactant was sucrose fatty acid ester SP 30. The systems were characterized through particle size analyses and zeta potential measurements. The entrapment efficiency of the particles was calculated. <sup>1</sup>H-NMR of the nanosuspensions allowed investigating the crystallinity of the particles. Furthermore, release experiments of a model drug [Indomethacin] were performed and the release kinetics was investigated. This study focuses on the investigation of how the nature and the amount of formulation components are able to modify the properties of the system. In particular, the concentration of the surfactant used for the nanosuspension stabilization, the nature and concentration of the lipid phase used for the nanoparticles preparation, as well as the drug- lipid ratio employed in the preparation of loaded SLNs were investigated. From the results obtained, SLNs with a narrow monomodal size distribution range from 190 to 400 nm were produced. The polydispersity results showed a polydispersity index [Pdl] in general lower than 0.25. The incorporation of IND in most cases increased the sizes of the SLN particles and the particles aggregation which was represented by significantly higher Z-average [intensity weighted mean of particle sizes] and Pdl's. The freshly prepared SLNs have a potential greater than -30 mV which was sufficient for a stable system in combination with the sterically stabilizing effect of the emulsifier. Glyceride SLNs showed good drug encapsulation but with a formation of aggregates. In contrast, wax- based SLNs possessed good physical stability with no aggregation but lacked sufficient drug encapsulation. These differences were attributed in part to different crystal packing. <sup>1</sup>H-NMR

results showed crystalline particles at room temperature. The comparison among the release profiles of different formulations allows affirming that these systems are suitable for modified oral delivery formulations. Release studies at pH 7.4 showed that IND release exhibited a biphasic pattern with an initial burst and prolonged release over 24 hours with kinetics obeying Higuchi model. Production of IND- loaded SLNs with new solid lipids and its future formulation as tablets could be new, cost effective and commercially viable alternative to the commercial products.

## Iron

### **Environmental studies of iron in sediments by means of x-ray absorption spectroscopy.**

Banas, A.; Banas, K.; Yang, P.; Moser, H.O.; Breese, M.B.H.; Kubica, B.; Kwiatek, W.M.

*E-mail:slsba@nus.edu.sg*

National University of Singapore [NUS] - Singapore Synchrotron Light Source [SSLS]

**International Journal of Environmental Research** 2014; 8 (2): 263-272 (21 ref.)

**Keywords:** Geologic Sediments; Environment; X-Ray Absorption Spectroscopy; Multivariate Analysis

**Abstract:** X-ray Absorption Fine Structure [XAFS] spectroscopy was used to identify directly the metal speciation and local bonding environment of Fe in sediments originated from Dobczyce reservoir [Poland]; special attention was paid to analysis of samples collected from points situated at different distances from the land. The combination of traditional approach to data analysis as well as usage of multivariate techniques provided reliable information on the local Fe structure. The obtained average oxidation state for Fe species in all samples was found to be at about +3. The number, nature, and proportion of Fe species in sediments samples were calculated by a coupled Principal Component Analysis [PCA] and Least-Squares Fitting [LSF] procedure. Results indicate for a high similarity among analyzed data collected for various points from Dobczyce reservoir. Among different forms of amorphous oxyhydroxides and various iron oxides commonly present in lake sediments, hematite [Fe<sub>2</sub>O<sub>3</sub>] and goethite [α-FeOOH] were found to be the dominant crystalline structures in analyzed samples. Based on that finding it can be concluded that Fe is principally bound to oxygen in sediment samples, therefore its [re]mobilization to the water may be neglected.

## Ischemic Preconditioning, Myocardial

### **Early stage effect of ischemic preconditioning for patients undergoing on-pump coronary artery bypass grafts surgery: systematic review and meta-analysis.**

Chai, Qing; Liu, Jin

Sichuan University - West China Hospita - Department of Critical Medicine and Anesthesiology

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 642-648 (27 ref.)

**Keywords:** Ischemic Preconditioning; Coronary Artery Bypass; Meta-Analysis as Topic; Myocardial Infarction; Reperfusion Injury

**Abstract:** During the on-pump coronary artery bypass grafts surgery, ischemia/reperfusion injury would happen. Ischemia preconditioning could increase the tolerance against subsequent ischemia and reduce the ischemia/reperfusion injury. However the clinical outcomes of the available trials were different. We searched the Cochrane Central Register of Controlled Trials on The Cochrane Library [Issue 3, 2013], the Medline/PubMed and CNKI in March 2013. RevMan 5.1.6 and GRADEprofiler 3.6 were used for statistical analysis and evidence quality assessment. Heterogeneity was evaluated with significance set at P<0.10. Eighteen randomized controlled trials were included. There were no differences on in-hospital mortality, postoperative myocardial infarction morbidity between ischemia preconditioning and control groups. The heterogeneity of creatine kinase-MB level 24 hours after surgery was obvious. The differences of 72 hours area under the curve of cardiac troponinT [mean differences of -14.50, 95% confidence interval of -21.71 to -7.28] and troponin I [mean differences -181.79, 95% confidence interval of -270.07 to -93.52] after surgery were observed. All the 18 trails, the positive and the negative results were equal. The meta-analysis results should be interpreted with caution due to limited effective data. Because of high cost-effectiveness, ischemia preconditioning could not be denied completely. Large-scale randomized studies are needed, with the operation procedures and included criteria being more specific.

## Ketamine

### **therapeutic use**

### **Intraoperative low-dose ketamine infusion reduces acute postoperative pain following total knee replacement surgery: a prospective, randomized double-blind placebo-controlled trial.**

Cengiz, Pellin; Gokcinar, Derya; Karabeyoglu, Isil; Topcu, Hulya; Cicek, Gizem Selen; Gogus, Nermin

Ankara Numune Training and Research Hospital - Department of Anesthesiology

**JCPSP-Journal of the College of Physicians and Surgeons Pakistan** 2014; 24 (5): 299-303 (23 ref.)

**Keywords:** Pain, Postoperative-drug therapy; Intraoperative Care; Infusions, Intravenous; Acute Disease; Arthroplasty, Replacement, Knee; Prospective Studies; Double-Blind Method; Placebos; Analgesia

**Abstract:** To evaluate the effect of intraoperative low-dose ketamine with general anesthesia on postoperative pain after total knee replacement surgery. A randomized, double-blind comparative study. Ankara Numune Training and Research Hospital, Turkey, from January and June 2011. Sixty adults undergoing total knee arthroplasty were enrolled in this study. The patients were randomly allocated into two groups of equal size to receive either racemic ketamine infusion [6 microg/kg/minute] or the same volume of saline. A visual analogue scale [VAS] was used to measure each patient's level of pain at 1, 3, 6, 12, and 24 hours after surgery. Time to first analgesic request, postoperative morphine consumption and the incidence of side effects were also recorded. Low-dose ketamine infusion prolonged the time to first analgesic request. It also reduced postoperative cumulative morphine consumption at 1, 3, 6, 12, and 24 hours postsurgery [ $p < 0.001$ ]. Postoperative VAS scores were also significantly lower in the ketamine group than placebo, at all observation times. Incidences of side effects were similar in both study groups. Intraoperative continuous low-dose ketamine infusion reduced pain and postoperative analgesic consumption without affecting the incidence of side effects.

## Kidney Neoplasms

### pathology

#### A study of renal tumours in tertiary care hospitals.

Mehdi, M. Zain; Naseem, Nadia; Sial, Safdar; Mehmood, Rana Qaiser; Aman Ur-Rehman; Qadir, S. Imran; Nagi, A.H. University of Health Sciences

**Biomedica** 2014; 30 (1): 48-52 (24 ref.)

**Keywords:** Tertiary Care Centers; Carcinoma, Renal Cell; Hematuria

**Abstract:** Renal cell carcinomas [RCC] comprise 90% of all renal tumours and are presage of poor outcome. Very little data has been published in Pakistan regarding the clinical and pathological manifestations of the disease. A total 0/50 cases presenting with different subtypes of RCC were selected from Allied Hospital Faisalabad and Sheikh Zayed Hospital, Lahore. Clinical details were obtained from the hospital records. The fresh nephrectomy specimens were further processed according to College of American Pathologists guidelines. Mean age of the study population was 50.16 +/- 11.982 years. Male to female ratio was 2.57:1. Left to right ratio was 1:1. Most tumours [n = 36, 72%] were located in the upper pole. Most common symptom was hematuria [n = 38, 76%]. Mean of the greatest dimension was 10.41 +/- 4.22 cm. The most common stage of presentation was stage II [n = 21, 42%] and histological subtype was clear cell carcinoma [n = 37, 74%]. Renal cell carcinoma, including its chromophobe variant, is a growing malignancy in Pakistan. Delay in seeking medical care on the part of patient and inadequate facilities account for the tumour growing to a larger size and more advanced stage of malignancy in our country.

## Knee

### pathology

#### Knee magnetic resonance imaging: descriptive frequency and outcome in university of Jordan hospital.

Hadidi, Fadi A.; AbdelMalek, Sherin W.; Al Najjar, Mahasen S.; Al Ajlouni, Jihad M.; Samarah, Omar Q.; Hasweh, Reem N.; Hadidy, Azmy M.

*E-mail: Fadihadidi@yahoo.com*

University of Jordan Hospital - Faculty of Medicine - Special Surgery Department - Orthopedic Division

**Jordan Medical Journal** 2013; 47 (4): 348-355 (17 ref.)

**Keywords:** Magnetic Resonance Imaging; Anterior Cruciate Ligament; Posterior Cruciate Ligament; Bone Marrow; Menisci, Tibial; Osteoarthritis; Edema

**Abstract:** To evaluate the experience of the university of Jordan hospital regarding knee magnetic resonance imaging and to compare our findings with those published in the medical literature. 575 knee magnetic resonance imaging exams for 569 patients performed over the period of 10 years were reviewed. 109 patients, 66 males and 43 females with a percentage of [19.1%] had normal knee magnetic resonance image and were excluded from the study while the remaining 460 patients [80.9%] with variable abnormalities were included in our study. Variable knee pathologies were noted, the most common was knee fluid found in 381 patients representing [81.7%] of the pathologies detected, followed by bone marrow edema in 240 patients [51.5%], while cruciate ligament tear of the knee was found in 205 patients [43.99%], followed by meniscal tear in 184 patients [39.48%] and meniscal degeneration in 135 patients [28.96%]. Finally, osteoarthritis which was the least common finding seen in 63 patients [13.5%]. Patients referred for knee magnetic resonance imaging scanning in the university of Jordan hospital showed diverse imaging findings with the most common abnormality detected being joint fluid followed by bone marrow edema and cruciate ligament tear. The great benefit from knee magnetic resonance imaging was in diagnosing meniscal tear, staging fractures and characterization of other miscellaneous pathologies. The prevalence of knee pathologies among our patients as revealed by knee magnetic resonance imaging was not in concordance with what is published in the literature especially for gender distribution of anterior cruciate ligament tear.

## Lamiaceae

### Total phenolic content and antibacterial activity of five plants of labiatae against four foodborne and some other bacteria.

Mahboubi, Arash; Kamalinejad, Mohammad; Ayatollahi, Abdul Majid; Babaeian, Mohammad  
Shahid Beheshti University of Medical Sciences - School of Pharmacy - Department of Pharmaceutics

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 559-566 (52 ref.)

**Keywords:** Phenols; Anti-Bacterial Agents; Foodborne Diseases; Bacteria; Thymus Plant; Molybdenum; Tungsten Compounds

**Abstract:** The aim of this study was to evaluate the antibacterial effects of *Thymus vulgaris*, *Thymus caramanicus*, *Zataria multiflora*, *Zizphora clinopodioides* and *Zizphora tenuior* against four foodborne and four other bacteria including *Staphylococcus aureus*, *Shigella dysenteriae*, *Salmonella typhimurium*, *Escherichia coli*, *Staphylococcus epidermidis*, *Bacillus subtilis*, *MRSA* and *Pseidiomona aeruginosa* and measuring the amount of total phenolics of the plants. The extracts were prepared by maceration method. Pre-evaluation of the antimicrobial effect was utilized by cup-plate technique and then Minimum Inhibitory Concentration was determined by agar dilution method according to NCCLS. The total phenolics as a possible cause of antibacterial effect, was measured by Folin-Ciocalteu colorimetry. The results showed that *T. caramanicus* and *Z. multiflora* were the most effective ones with MIC values between 0.78-3.125 mg/mL against all of the Bactria and *Z. tenuior* and *Z. clinopodioides* had the minimum antimicrobial activity. Total phenolic contents of these five plants were different and followed the general pattern of the antimicrobial effect. The antibacterial effects and the total phenolic content of *T. caramanicus* and *Z. multiflora* were remarkable and should be investigated more in future studies.

## Laser Therapy, Low-Level

### In vitro therapeutic effects of low level laser at mRNA level on the release of skin growth factors from fibroblasts in diabetic mice.

khoo, Nooshafarin Kazemi; Shokrgozar, Mohammad Ali; Kashani, Iraj Ragerdi; Amanzadeh, Amir; Mostafavi, Ehsan; Sanati, Hassan; Habibi, Laleh; Talebi, Saeid; Abouzaripour, Morteza; Akrami, Seyed Mohammad  
Tehran University of Medical Sciences - Department of Medical Genetics

**AJMB-Avicenna Journal of Medical Biotechnology** 2014; 6 (2): 113-118 (31 ref.)

**Keywords:** Intercellular Signaling Peptides and Proteins; Skin; Fibroblasts; Mice; Diabetes Mellitus, Experimental; Fibroblast Growth Factors; Platelet-Derived Growth Factor; Vascular Endothelial Growth Factor A; Wound Healing; Cell Culture Techniques; RNA, Messenger

**Abstract:** Numerous in vitro reports suggest that Low Level Laser Therapy [LLL] affects cellular processes by biostimulation, however most of them emphasize on using visible light lasers which have low penetration. The aim of this study was to determine the effect of infrared laser light [which is more useful in clinic because of its higher penetration] on secretion of Fibroblast Growth Factor [FGF], Platelet Derived Growth Factor [PDGF] and Vascular Endothelial Growth Factor [VEGF], as important growth factors in wound healing. Fibroblasts were extracted from the skin of 7 diabetic and 7 nondiabetic mice and cultured. Cell cultures of experimental group were irradiated with single dose of LLLT [energy density of 1 J/ cm<sup>2</sup>] using an 810 nm continuous wave laser and the control group was not irradiated. Secretion of growth factors by skin fibroblasts were quantified through real time polymerase chain reaction. Diabetic irradiated group showed significant increase in FGF [p=0.017] expression, although PDGF increased and VEGF decreased in both diabetic and nondiabetic irradiated groups, but these variations were not statistically significant. These results suggest that LLLT may play an important role in wound healing by stimulating the fibroblasts.

## Leprosy

### The clinical and neurophysiological study of leprosy.

Cabalar, Murat; Yayla, Vildan; Ulutas, Samiye; Senadim, Songul; Oktar, Ayla Culha  
Bakirkoy Dr. Sadi Konuk Research and Training Hospital - Department of Neurology

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 501-506 (31 ref.)

**Keywords:** Neurophysiology; Neurology; Disabled Persons

**Abstract:** The aim of this study was to evaluate neurological and neurophysiological features of leprosy. Methods: Seventy seven hospitalized leprosy patients [52 male, 25 female] were examined neurological and neurophysiologically between 2010 and 2012. Standard procedures were performed for evaluating sensory and motor conduction studies to all patients. Motor studies were carried out on median, ulnar, tibial and common peroneal nerves. Sensory studies were carried out on median, ulnar and sural nerves. Sympathetic skin response [SSR] recordings on both hands and feet, and the heart rate [R-R] interval variation [RRIV] recordings on precordial region were done in order to evaluate the autonomic dysfunction. Results: The mean age was 59.11 +/- 14.95 years ranging between 17 and 80 years. The mean duration of disease was 35.58 +/- 18.30 years. Clinically, the patients had severe deformity and disability. In neurophysiological examinations, sensory, motor conduction studies of the lower extremities were found to be more severely affected than upper, and sensory impairment predominated over motor. Abnormal SSRs

were recorded in 63 [81.8%] cases of leprosy. Abnormal RRIVs were recorded in 41 [53.2%] cases and abnormal RRIVs with hyperventilation were recorded in 55 [71.4%] cases of leprosy. Significant differences were found between SSR and sensory conduction parameters of median, ulnar nerves as well as motor conduction parameters of median, ulnar and peroneal nerves [ $p < 0.05$ ]. Peripheral nervous system dysfunction is accompanied by autonomic nervous system dysfunction in leprosy patients. Sympathetic involvement may predominate over parasympathetic involvement.

### **Inequality of leprosy disability in Iran, clinical or socio-economic inequality: an extended concentration index decomposition approach.**

Entezarmahdi,Rasool; Majdzadeh, Reza; Foroushani, Abbas Rahimi; Nasehi, Mahshid; Lameei, Abolfath; Naieni, Kourosh Holakouie

Tehran University of Medical Sciences - School of Public Health - Department of Epidemiology and Biostatistics

**IJPM-International Journal of Preventive Medicine** 2014; 5 (4): 414-423 (48 ref.)

**Keywords:** Socioeconomic Factors; Disability Evaluation; Cross-Sectional Studies

**Abstract:** Despite significant reduction in global disease prevalence, leprosy still has a high rate of disability while its determinants are unfair and many of them are amendable. The objective of this study was to measure inequality of disability in leprosy in Iran. This was a cross-sectional study [2006-2007] on all living people affected by leprosy registered in W. Azerbaijan province health center, Western North of Iran. The outcome of the study was the socio-economic inequality considering presence or absence of grade 2 disability [G2D] based on the WHO classifications. An extended concentration index decomposition approach was used for analysis. Among 452 cases, 65.3% were male and 67% were affected by the multi bacillary type. Overall G2D was 65.3%. The estimated Concentration Index was -0.0782, showing presence of pro-poor socio-economic inequality of G2D, while extended CI estimation [ $v = 5$ ] was -0.163. Achievement index with coefficiently = 5] revealed that G2D mean was 16% more than classic mean in the poorest group. The result of decomposition of the existing inequality revealed that, some of the determinants such as receiving mono-therapy, education, urbanization, and bacillus calmette ; guerin [BCG] vaccination had shared contribution [67.4%, 61.8%, 59.2%, and 57.5% respectively]. This study provided new perspective for the health j system to leprosy control considering the significant gap between; rich and poor [inequality] regarding G2D disability, and its effective elements in socio-economic strata. Some effective actions can be considered to reduce the scale of existing inequality.

## Leukemia, Lymphocytic, Chronic, B-Cell

### **drug therapy**

### **Efficacy and tolerance of fludarabine and cyclophosphamide [FC] combination regimen in advance stage of chronic lymphocytic leukemia.**

Matti, Bassam Francis; Naji, Alaadin Sahham; Alwan, Alaa Fadhil; Majeed, Ammar Fadhil; Saber, Shahlaa Fadhil

Baghdad Teaching Hospital - Hematology unit

**Jordan Medical Journal** 2013; 47 (4): 298-307 (11 ref.)

**Keywords:** Vidarabine-analogs and derivatives; Cyclophosphamide; Treatment Outcome; Drug Tolerance; Antineoplastic Combined Chemotherapy Protocols; Prospective Studies

**Abstract:** based on data suggesting synergistic activity of fludarabine [F] and cyclophosphamide [C] combination therapy. This study was conducted to assess the efficacy and tolerability of this combination chemotherapy in Iraqi adult patients with advanced chronic lymphocytic leukemia [CLL], reflected by better response rate, treatment free survival and overall survival benefit. A prospective study carried out in Baghdad teaching hospital and national hematology center in Baghdad between February 2005 and february 2009. It included 64 Iraqi patients aged between 39-77 years old with advanced stage CLL. Written informed consent wasobtained from all patients prior to start of therapy. They received FC combination therapy [fludarabine 25 mg/ m2 plus cyclophosphamide 250mg/ m2 for 3 days intravenously, repeated every 28 days]. Treatment was administered for 6 courses. Out of 64 CLL patients with Binet stage B and C who were included in this study, 41[64.1%] patients were male and 23 [35.9%] patients were females [M:F ratiol.7:] with median time of follow-up 26 months, median age was 59.9 years. Forty- eight [75%] patients were previously untreated, of them 22 [45.8%] patients were stage B and 26 [45.1%] patients were stage C while the other 16 [25%] patients with CLL were previously treated with an alkylating agents, of them 7[43.7%] of stage B and 9 [56.2%] with stage C. This combination chemotherapy resulted in 39.1% complete remission and 39.1% partial remission. The two years median treatment-free survival was 90% with the median duration of response was 18 months, there was a significant difference [ $p<0.005$ ] between the different Binet stage group [CandB] and degree of response, with better response rate in those with stage C than those with stage B. the overall response rate was 88.5%, 65.5% for stage C and B respectively.The major toxicity[grade 3-4] were nausea and vomiting while the myelosuppression of grade 1and2 for leucopenia and neutropenia occur in 19%, 14% respectively. Fludarabine and cyclophosphamide combination regimen is an effective therapy for patients with advance CLL with high response and complete remission rate in those untreated and previously treated CLL patients, with good tolerability to this combination.

## Leukoplakia, Oral

### pathology

#### **Association of human papilloma virus 16 infection and p53 polymorphism among tobacco using oral leukoplakia patients: a clinicopathologic and genotypic study.**

Sikka, Seema; Sikka, Pranav

[E-mail:simu50@yahoo.com](mailto:simu50@yahoo.com)

Sudha Rastogi Dental College - Department of Oral and Maxillofacial Pathology

**IJPM-International Journal of Preventive Medicine** 2014; 5 (4): 430-438 (41 ref.)

**Keywords:** Leukoplakia, Oral-genetics; Human papillomavirus 16; Papillomavirus Infections; Tumor Suppressor Protein p53; Polymorphism, Genetic; Tobacco; Smoking; Genotype

**Abstract:** Human papillomavirus [HPV] and p53 alterations are speculated to play a role in carcinogenesis. This study was carried out to find out the association of HPV and p53 with precancerous lesions of the oral cavity such as leukoplakia: The objective of this study was to find the association among human papilloma virus [HPV] 16 infections and p53 polymorphism in tobacco using the oral leukoplakia patients. A total of 91 oral leukoplakia patients and 100 controls were randomly selected from the out-patient department of a tertiary care dental hospital of North-east India. Blood samples were drawn incisional biopsy was performed from the lesion proper and the tissue was processed for histopathological grading. Cytological smears were taken from the lesional site of leukoplakia patients and buccal mucosa of controls. The rate of HPV infection and p53 polymorphism was detected with the help of polymerase chain reaction, gel electrophoresis and deoxyribonucleic acid sequencing. The rate of HPV 16 infection was found significantly high in the oral leukoplakia patients. No particular p53 genotype at exon 4 of codon 72 was found to be associated with oral leukoplakia, but [C] allele [proline] at exon 4 of codon 72 was significantly raised in these patients. Oral leukoplakia, a well-known pre-cancerous lesion, has been shown to be associated with tobacco, but certain other factors like HPV infection and p53 polymorphism may play an important role in its development.

## Liver Cirrhosis

### congenital

#### **Can hepatitis e virus be considered as an etiology of cryptogenic cirrhosis?**

Sohrabi, Masoudreza; Zamani, Farhad; Shirangi, Alireza; Ajdarkosh, Hossein; Kivani, Hossein; Mohamadnejad, Mehdi Iran University of Medical Sciences - Gastrointestinal and Liver Disease Research Center - Firoozgar Hospital

**IJPM-International Journal of Preventive Medicine** 2014; 5 (4): 527-528 (7 ref.)

**Keywords:** Hepatitis E virus-pathogenicity; Hepatitis E; Cross-Sectional Studies

## Lunch

#### **Comparing school lunch and canteen foods consumption of children in Kayseri, Turkey.**

Ongan, Dilek; Inanc, Neriman; Cicek, Betul

[E-mail:dkatranaci@gmail.com](mailto:dkatranaci@gmail.com)

Izmir Katip Celebi University - Department of Nutrition and Dietetics

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 549-553 (32 ref.)

**Keywords:** Food; Child; Schools; Child Nutritional Physiological Phenomena; Cross-Sectional Studies

**Abstract:** School Nutrition Programs [SNPs] may have positive effects on children's food choices through high nutritional quality meals. This cross-sectional and descriptive study was conducted to determine nutritional quality of school lunch and to compare lunch consumption of students who participated in SNP and who did not, at the first governmental school serving school lunch in Kayseri, Turkey. Methods: One hundred and sixteen students aged 9-14 years were divided into two groups after being matched according to gender, age, grade; 58 participants [school lunch group; SL-G] and 58 nonparticipants [school canteen group; SC-G] were recruited. Energy-nutrient content of 5-day school lunch was determined by recipes. Socio-demographic data and lunch consumption on 5 consecutive weekdays with weighed left overs were obtained. Lunch energy-nutrient intakes and anthropometric measurements were compared. Results: School lunch was adequate for vitamins [E and C], fibre, iron, inadequate for energy, carbohydrate, folate, calcium. Contribution of fat [36.6 +/- 6.8%] and saturated fat [12.2 +/- 3.5%] to energy and sodium content was high [1001 mg] in school lunch. SL-G consumed significantly higher protein, vitamin C, thiamine, vitamin B[6], potassium, magnesium, iron, zinc [p < 0.001 for each] than SC-G. Energy [p < 0.001], carbohydrate [p < 0.001], fat [p < 0.05], vitamin E [p < 0.001] intakes of SC-G were significantly higher than SL-G. Body weights, height, body mass index of groups were similar. Foodservice at school should be revised with collaboration of school management, catering firm, dietetic professionals. Policy should focus on reducing fat, saturated fat, sodium content and meeting energy-nutrient requirements of school aged children.



## Malaria

### prevention and control

#### **Effect of health education based on the protection motivation theory on malaria preventive behaviors in rural households of Kerman, Iran.**

Ghahremani, Leila; Faryabi, Reza; Kaveh, Mohammad Hossein

Shiraz University of Medical Sciences - School of Health - Department of Education and Health Promotion

**IJPM-International Journal of Preventive Medicine** 2014; 5 (4): 463-471 (39 ref.)

**Keywords:** Health Education; Motivation; Behavior; Rural Population; Family Characteristics; Questionnaires; Non-Randomized Controlled Trials as Topic

**Abstract:** Malaria is one of the most serious diseases in pregnant women as well as children less than 5 years around the world. The present study aimed to investigate the effect of health education based on the protection motivation theory on malaria preventive behaviors in the households of Ghale Ganj, Kerman, Iran in 2011. The present quasi-experimental study was conducted on 144 households covered by 8 health centers of Ghale Ganj, Kerman. The study samples were selected through systematic random sampling and the study data were collected using a questionnaire including demographic information, the constructs of the protection motivation theory, and a checklist for assessing the malaria preventive behaviors. After the pre-test, the intervention group underwent an educational intervention and after two months, the post-test was performed through the same questionnaire. Then, the data were entered into the SPSS statistical software [v. 18] and analyzed using Chi-square and Wilcoxon non-parametric tests. Besides,  $P < 0.05$  was considered as statistically significant. Before the intervention, no significant difference was found between the two study groups regarding perceived vulnerability, perceived severity, response costs, self-efficacy, response efficacy, and malaria preventive behaviors. After the intervention, however, a significant increase was observed in the intervention group's mean scores of all the constructs of the protection motivation theory as well as malaria preventive behaviors [ $P < 0.01$ ]. According to the findings of the study, educational intervention based on the protection motivation theory is highly effective in promoting malaria preventive behaviors.

## Masks

#### **Comparison of three methods in improving bag mask ventilation.**

Golzari, Samad EJ; Soleimanpour, Hassan; Mehryar, Hamidreza; Salarilak, Shaker; Mahmoodpoor, Ata; Panahi, Jafar Rahimi; Afhami, Mohammadreza; Sabahi, Majid; Hassani, Zahra

Tabriz University of Medical Sciences - Cardiovascular Research Center

**IJPM-International Journal of Preventive Medicine** 2014; 5 (4): 489-493 (23 ref.)

**Keywords:** Pulmonary Ventilation; Dentures; Single-Blind Method; Anesthesia; Mouth, Edentulous; Prospective Studies

**Abstract:** Increased life expectancy in populations has brought along specific new scenarios in the fields of medicine for the elderly; prevalence of physical complications such as edentulism and patients with dentures is growing. Management of anesthesia and ventilation in this group of patients has turned into a great challenge. Some researchers suggest dentures to be left in place during bag-mask ventilation; yet, no unanimous agreement exists in this regard. In a single blind randomized clinical trial, we studied 300 patients with ASA class I, II [American Society of Anesthesiologists], Mallampati class [I, II] and aged over 55 years in three groups. After induction of anesthesia, in group G dentures were removed and in each buccal space an eight-layer 10x10 cm gauze and an oral airway were placed. In group D, the dentures and an oral airway were left in place. In group C [control], after removing dentures just an appropriate oral airway was placed. Then, each three group underwent bag-mask ventilation. Success of bag-mask ventilation [BMV] was considered as increase in end-tidal carbon dioxide to more than 20 mmHg and back to baseline with fresh gas flow of 3 L/min and adjustable pressure limiting valve pressure of 20 cm H<sub>2</sub>O. Success rates were evaluated between groups. Effective BMV was possible in 91 [91%], 64 [64%] and 41 [41%] patients in groups G, D and C respectively. The differences were statistically significant. Successful BMV rate was significantly higher in female patients in group G compared to group C; 43/44 versus 25/46 individuals,  $P = 0.0001$ , odds ratio = 0.03, 95% confidence interval [0.00, 0.22]. Leaving dentures in place in edentulous patients after inducing anesthesia improves bag-mask ventilation. However, placing folded compressed gauze in buccal space leads to more significant improvement in BMV compared to leaving dentures in place.

## Mean Platelet Volume

#### **Evaluation of mean platelet volume values in lean women with polycystic ovary syndrome.**

Silfeler, Dilek Benk; Kurt, Raziye Keskin; Yengil, Erhan; Un, Burak; Arica, Secil; Baloglu, Ali

*E-mail:* [drsilfeler@yahoo.com](mailto:drsilfeler@yahoo.com)

Mustafa Kemal University - Faculty of Medicine - Department of Obstetrics and Gynecology

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 589-592 (14 ref.)

**Keywords:** Polycystic Ovary Syndrome; Thinness; Cross-Sectional Studies

**Abstract:** Mean Platelet Volume [MPV] is an important indicator of platelet activation. It is known that MPV increases in patients with coronary artery disease, diabetes mellitus, atherosclerosis and Polycystic ovary syndrome [PCOS]. Our aim was to measure the MPV in lean patients with polycystic ovary syndrome. The present study was designed to examine the platelet function by measuring MPV in non-obese women with PCOS. A total of 50 outpatients with PCOS were included. The control group consisted of 50 healthy subjects. Serum platelet, MPV, and white blood cell [WBC] levels were compared and evaluated retrospectively in all participants. These values were compared by statistical analysis. There were no statistically significant difference in between groups regarding MPV [p=0.357], WBC [p=0.414] and platelet [p=0.666]. There are studies implying MPV increase in PCOS patients, in our patients MPV levels did not correlate with PCOS except for patients with obesity. We think that PCOS itself has no effect on MPV levels and obesity changes MPV levels.

## Mentha piperita

### Peppermint aqueous extract counteracts smooth muscle contraction in rat ileum.

Abuirmeleh, Amjad; Alkhodari, Abdulrahman; Alnnjeeli, Amal; Talhouni, Ahmad; Alsalahat, Izzeddin; Naddaf, Ahmad  
*E-mail: amjad.abuirmeleh@ju.edu.jo*

Al Isra University - Faculty of Pharmacy

**Jordan Journal of Pharmaceutical Sciences** 2014; 7 (1): 88-96 (3 ref.)

**Keywords:** Plant Extracts; Muscle, Smooth-drug effects; Muscle Contraction-drug effects; Ileum-drug effects; Acetylcholine; Potassium Chloride; Rats

**Abstract:** Peppermint is widely used for gastrointestinal disorders; however, its pharmacological action on isolated rat ileum has not yet been evaluated. In this study, the effect of peppermint aqueous extract was investigated for its ability to reduce rat ileal smooth muscle contractility induced by acetylcholine [Ach] and potassium chloride [KCl]. The experiments were conducted using an organ bath apparatus. A section of rat ileum was suspended in an organ bath containing Tyrode's solution. The tissue was stimulated with either Ach or KCl. The tissue was kept under 1 g tension at 37°C and continuously gassed with O<sub>2</sub>. Ileal smooth muscle contractility was studied in the absence and presence of peppermint. Peppermint aqueous extract prevented ileal smooth muscle contractility induced by both Ach and KCl. The aqueous extract of peppermint [lg/ml] caused a rightward shift of the Ach dose response curve and brought about a decrease in the maximum response. This extract also produced a rightward shift in the KCl dose response curve but without affecting the maximum response. These results indicate that peppermint aqueous extract counteracts Ach and KCl induced smooth muscle contractility in rat ileum. The results also suggest that the peppermint effect on Ach induced contractility was non competitive in nature. The reduction in KCl induced contractility also indicates that peppermint aqueous extract was at least partially mediated by its effect on ileal smooth muscle calcium channels.

## Mercury

### Transferring of Hg concentration from ambient air to rain water and surface soil in an industrial urban area.

Ghadaksazzadeh, M.; Sekhavatjou, M.S.; Alhashemi, A. Hosseini; Hejabi, A.Taghinia

Islamic Azad University - Khouzestan Science and Research Branch - Department of Environmental Engineering

**International Journal of Environmental Research** 2014; 8 (2): 479-482 (21 ref.)

**Keywords:** Air Pollution; Air; Rain; Soil; Atmosphere; Environmental Pollution; Industry

**Abstract:** Mercury is a dangerous and an extremely toxic element, which can transfer to the food chain. Presence of this element in the atmosphere particularly during the rainy seasons cause soil and environmental pollution, therefore this research will evaluate the transformation of mercury vapor from the atmosphere through precipitation into the soil. In the present study, mercury concentrations were determined during two seasons [winter and summer 2011] with 6 air, 14 rainwater and 6 soil, sampling stations. Collection, preparation and analysis of the air, rain, soil samples were based on NIOSH 6009, EPA1631 and EPA 7000 methods, respectively. Mercury concentration was determined by using cold vapor atomic absorption after sample preparation. The results show that the mean mercury vapour concentration in the air samples of Ahvaz city in winter and summer were 3.749 +/- 2.625 ng/m<sup>3</sup> and 2.379 +/- 0.984 ng/m<sup>3</sup>, respectively. Further, the range of this pollutant in the air of studied area during the summer and winter seasons were 1.83-3.962 ng/m<sup>3</sup> and 1.394-5.00 microg/m<sup>3</sup>, respectively. The highest value of Hg concentration in the rainwater sample was 0.77 +/- 0.0019 ppb and the mean concentration of mercury in the surface soil samples of the city was 0.511 microg/g in winter. Finally, Mercury comparison between results of air and soil samples as well as air and precipitation samples at the winter season [p<0.01] showed a significant relationship.

## Metabolic Syndrome X

### Metabolic syndrome as a risk factor for elevated intraocular pressure.

Sahinoglu Keskek, Nedime; Keskek, Sakir Ozgur; Cevher, Selim; Kirim, Sinan; Kayiklik, Asim; Ortoglu, Gulay; Saler, Tayyibe

Numune Training and Research Hospital - Department of Ophthalmology

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 477-482 (39 ref.)

**Keywords:** Intraocular Pressure; Risk Factors; Cornea; Ocular Hypertension; Cross-Sectional Studies

**Abstract:** The aim of this study was to investigate the association between intraocular pressure and metabolic syndrome by comparing central corneal thicknesses. One hundred sixty-two subjects were enrolled in this cross-sectional study, with 89 subjects in a metabolic syndrome group and 73 subjects in a control group. Ophthalmological examinations, including intraocular pressure and central corneal thickness measurements, were performed on each subject. Serum fasting glucose, triglyceride and HDL cholesterol levels were measured, and waist circumference, systolic and diastolic blood pressure of all patients were recorded. Participants with metabolic syndrome had a significantly higher intraocular pressure than those without metabolic syndrome [ $p = 0.008$ ], and there was no statistically significant difference between the central corneal thickness of the two groups [ $p = 0.553$ ]. Most of the metabolic syndrome components were associated with higher intraocular pressure [ $p < 0.05$ ]. There is a relationship between metabolic syndrome and intraocular pressure, but no association between metabolic syndrome and central corneal thickness. Intraocular pressure is affected by central corneal thickness, and intraocular pressure is used to correct according to the central corneal thickness measurement. To our knowledge, this is the first study that determines the positive relationship between metabolic syndrome and intraocular pressure by comparing the central corneal thicknesses of the groups.

## Metal Ceramic Alloys

### Common post-fitting complications in tooth-supported fixed-fixed design metal-ceramic fixed dental prostheses.

Zafar, Nadia; Ghani, Fazal

University Campus - Khyber College of Dentistry - Department of Prosthodontics

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 619-625 (26 ref.)

**Keywords:** Dental Prosthesis; Prosthesis Fitting; Tooth; Cross-Sectional Studies

**Abstract:** To report the frequency of common complications and their levels in metal-ceramic fixed-dental prostheses [MC-FDPs]. A Descriptive Cross-sectional study was conducted at the Prosthodontics Department, Khyber College of Dentistry Peshawar from January 2011 to October 2012. Using a structured proforma, data from 139 subjects fulfilling the inclusion and exclusion criteria for the study and reporting complications in their MC-FDPs were collected using the method of interview, clinical and radiographic examination. Of 139 subjects [Mean age = 34 +/- 6.4 Years], 81 [58.3%] were males and 58 [41.7%] were female with a male to female ratio of 1.4:1. De-cementation was the most common complication [41.7%]. Least common complication was secondary caries [6.5%]. Level-1 complications were more prevalent [77.7%] than level-2 complications [22.3%]. In 91.4% cases, complications occurred before the FDP completed the fifth-years' service life with 25.2% of these occurring within the first years' service life. Irrespective of the type of complications, level-1 complications were more common with decementation being the most common complication. One-quarter of all the complications occurred within the first-year service life of the FDPs highlighting concern over the quality of the provided MC-FDPs.

## Metals, Heavy

### An investigation on heavy metals bio-sorption by Azolla filiculoides in the international Anzali wetland.

Sereshti, H.; Bakhtiari, S.; Toghyani, R.; Samadi, S.; Besharati Seidani, T.; Mahmoodi, N.O.

*E-mail: Serehti@khayam.ut.ac.ir*

University of Tehran - Faculty of Science - Department of Chemistry

**International Journal of Environmental Research** 2014; 8 (2): 377-386 (41 ref.)

**Keywords:** Wetlands; Spectrophotometry, Atomic; Bismuth; Indium; Lead

**Abstract:** The ultrasound assisted emulsification microextraction [USAEME] method followed by inductively coupled plasma-atomic emission spectrometry [ICP-AES] was used for preconcentration and determination of bismuth [Bi], indium [In] and lead [Pb] in the plant *Azolla filiculoides* Lam. Calix [4] pyrrole was used as a chelating agent and tetrachloroethylene was selected as extraction solvent. The main parameters of the USAEME method were optimized by using response surface methodology [RSM]. The optimal conditions were as follows: 130 microL for volume of extraction solvent, 4 min for sonication time, 6.75 [w/v%] for salt concentration, 890 mg/L for concentration of chelating agent and 7.5 for pH. The calibration curves were linear in the range of 1 -1500 microg/L for Bi and In. and 1 -1000 microg/L for Pb with the determination coefficients [R<sup>2</sup>] of 0.9983, 0.9974 and 0.9997, respectively. The limits of detection [LCDs] for Bi, In and Pb were 0.57, 0.76 and 0.84 microg/L, respectively. Under the optimal conditions, the method was successfully applied to the determination of Bi, In and Pb in *Azolla filiculoides* Lam. tissues in Anzali wetland and satisfactory relative recoveries [94-97%] were achieved.

**Concentrations and health risk assessments of heavy metals in fish from the Fosu lagoon.**

Akoto, O.; Eshun, F. Bismark; Darko, G.; Adei, E.

[E-mail:wofakmann@yahoo.com](mailto:wofakmann@yahoo.com)

Kwame Nkrumah University of Science and Technology - Department of Chemistry

**International Journal of Environmental Research** 2014; 8 (2): 403-410 (46 ref.)

**Keywords:** Fishes; Risk Assessment; Spectrophotometry, Atomic

**Abstract:** Concentrations of Cu, Pb, Cr, Cd, Mn, Ni, Fe and Zn were determined in the muscle samples of *Sarotherodon melanotheron* from the Fosu Lagoon in Cape Coast using atomic absorption spectrophotometer. The results showed that, metal concentration in the fish muscle was in the order Mn > Zn > Fe > Pb > Ni > Cd > Cu > Cr. Mean concentrations of Pb and Cd in the fish exceeded the maximum tolerable limit set by the European Union. Although the mean concentrations of some metals exceeded this limit, their estimated daily intakes were below their oral reference dose recommended by the international regulatory bodies. Health risk assessment of consumers from the intake of metal contaminated in the muscle of *S. melanotheron* from the lagoon was evaluated by using Health Risk Index [HRI] calculations. In this study, the total HRI through consumption of fish calculated by adding the individual HRIs was less than 1, indicating that there is no significant potential health risk associated with the consumption of fish from the Fosu Lagoon.

**Ecological risk posed by heavy metals contamination of ship breaking yards in Bangladesh.**

Aktaruzzaman, M.; Chowdhury M.A.Z.; Fardous, Z.; Alam, M. K.; Hossain, M.S.; Fakhruddin, A.N.M.

Jahangirnagar University - Department of Environmental Sciences

**International Journal of Environmental Research** 2014; 8 (2): 469-478 (27 ref.)

**Keywords:** Ecology; Water; Geologic Sediments; Lead; Manganese; Chromium; Copper; Zinc

**Abstract:** Pollution of water and soils by heavy metals is an emerging problem in industrialized countries. The present study was conducted to investigate the heavy metals concentration in water and sediment samples from ship breaking sites of Sitakunda to assess the potential ecological risk posed by heavy metal using different methods. Heavy metals concentration was analyzed by Atomic Absorption Spectroscopy Concentrations of all the tested heavy metals except Cr in water samples of ship breaking site, Sitakunda were lower than recommended values. The mean concentration of Cr was found 0.51  $\pm$  0.284 mg/l. Concentrations of all the tested heavy metals except Mn in sediment samples were higher than standard limit. The concentrations of Pb, Mn, Cr, Cu and Zn in the sediment were 55.93  $\pm$  18.70, 20.08  $\pm$  4.03, 106.8  $\pm$  47.65, 50.09  $\pm$  18.31, and 70.71  $\pm$  19.45 mg/kg, respectively. Based on Geoaccumulation Index, Contamination factor. Sediment Quality Guidelines, the sediment of ship breaking site can be treated as unpolluted to moderately polluted with Pb, Zn, Cr and Cu but unpolluted with Mn. The Enrichment factors of Pb, Mn, Cr, Cu and Zn in the sediment were: 2.97  $\pm$  0.98, 0.035  $\pm$  0.008, 1.97  $\pm$  0.88, 1.99  $\pm$  0.73, and 1.17  $\pm$  0.32, respectively. The Enrichment factor [ $>1$ ] in all sampling sites, suggesting source of those metals [Pb, Cr, Cu and Zn] were more likely to be anthropogenic. Based on the Potential Ecological Risk Index the ship breaking site posed to low risk to the environment. The results of present study clearly indicated that the ship breaking site was moderately polluted with heavy metals and pose low risk to the ecosystem.

**Effects of heavy metals from petroleum pollutions on carbonate surface sediments of the Persian Gulf.**

Chenari, A. Dehghan; Lak, R.

[E-mail:dehghan\\_afsaneh@yahoo.com](mailto:dehghan_afsaneh@yahoo.com)

Geological Survey Organization of Iran - Marine Geology Management

**International Journal of Environmental Research** 2014; 8 (2): 297-304 (29 ref.)

**Keywords:** Petroleum Pollution; Carbonates; Geologic Sediments; Indian Ocean

**Abstract:** Persian Gulf is a tectonic intra-continental sediment basin in which 40% of global oil and gas trade carries out and is a rich oil and gas resource. Persian Gulf area is about 236000km<sup>2</sup> that is one of the largest marine habitats including corals, sponges, crabs, fishes clams, scaphopodas, cephalopodas, foraminiferas, echinodermatas, ostracodas and bryozoas. some of them live in seabed sediments of Persian Gulf and their footprints of are still available and visible on the sediments. This study aimed to identify the effects of oil filters, drilling platforms and ship traffics on seabed sediments, we used 240 surface sediment, Sampled Sea cruise named [MG-2008-PG Cruise] within six fractions and sedimentary components were studied during morphoscopic and morphometric tests by Binocular Microscope as well as Electron Microscope in some cases. Chemical synthesis carried out with chemical analysis with ICP instrument and organic material proportion determination by Rock-Eval device. Results indicate that the effect of pollution in Persian Gulf has endangered fauna environments and absorption by shells has changed skin color to red, grey, and black. Some shells have deformed and lost their ornament. In addition, pollution has led to change the color of ooids. It identified that black color was due to existence of hydrous iron sulfide, organic materials, and oil pollutants, the source of elements could rather be from organic sources such as oil.

## Metaproterenol

### Computational aided-molecular imprinted polymer design for solid phase extraction of metaproterenol from plasma and determination by voltammetry using modified carbon nanotube electrode

Ahmadi, Farhad; Karamian, Ehsan

[fahmadi@kums.ac.ir](mailto:fahmadi@kums.ac.ir)

Kermanshah University of Medical Sciences<sup>a</sup>Faculty of Pharmacy<sup>c</sup>Nano Drug Delivery Research Center, Kermanshah, Iran

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 417-430 (48 ref.)

**Keywords:** Polymers; Plasma; Nanotubes, Carbon; Electrodes; Computational Biology; Solid Phase Extraction

**Abstract:** A molecular imprinted polymer [MIP] was computationally designed and synthesized for the selective extraction of metaproterenol [MTP], from human plasma. In this regards semi empirical MP3 and mechanical quantum [DFT] calculations were used to find a suitable functional monomers. On the basis of computational and experimental results, acrylic acid [AA] and DMSO:MeOH [90:10%V/V] were found to be the best choices of functional monomer and polymerization solvents, respectively. This polymer was then used as a selective sorbent to develop a molecularly imprinted solid-phase extraction [MISPE] procedure followed by differential pulse voltammetry by using modified carbon nanotube electrode. The analysis was performed in phosphate buffer, pH 7.0. Peak currents were measured at +0.67 V versus Ag/ AgCl. The linear calibration range was 0.026-8.0 microg ml<sup>-1</sup> with a limit of detection 0.01 microg ml<sup>-1</sup>. The relative standard deviation at 0.5 microg ml<sup>-1</sup> was 4.76% [n=5]. The mean recoveries of 5 microg ml<sup>-1</sup> MTP from plasma was 92.2% [n=5]. The data of MISPE-DPV were compared with the M1SPE-HPLC-UV. Although, the MISPE-DPV was more sensitive but both techniques have similar accuracy and precision

## Motor Activity

### A national strategy for promoting physical activity in Oman a call for action.

Mabry, Ruth; Owen, Neville; Eakin, Elizabeth

[E-mail:rmmabry@gmail.com](mailto:E-mail:rmmabry@gmail.com)

Office of the World Health Organization

**SQUMJ-Sultan Qaboos University Medical Journal** 2014; 14 (2): 156-161 (54 ref.)

**Keywords:** Public Health; Health Promotion; Epidemiology; Health Policy

**Abstract:** The increasing prevalence of chronic disease in Oman is a public health challenge. Available evidence in Oman on physical inactivity, the fourth leading risk factor for chronic disease, calls for urgent action to reduce physical inactivity as part of a key strategy to address chronic disease in Oman. The public health implications of this evidence for Oman are considered in light of recommendations outlined in the Toronto Charter for Physical Activity. The charter provides a systematic approach of physical activity and outlines an action plan that could be adapted to the Omani context. Urgent intersectoral action focusing on a shared goal and a more deliberate public health response addressing physical inactivity is required. Further research is needed on the determinants of physical inactivity and culturally appropriate interventions in order to guide future public health actions.

## Mouth Neoplasms

### Comparative studies of salivary and blood sialic acid, lipid peroxidation and antioxidative status in oral squamous cell carcinoma [OSCC].

Rasool, Mahmood; Khan, Saima Rubab; Malik, Arif; Khan, Khalid Mahmood; Zahid, Sara; Abdul Manan; Qazi, Mahmood Husain; Naseer, Muhammad Imran

The University of Lahore - Centre for Research in Molecular Medicine

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 471-472 (26 ref.)

**Keywords:** Carcinoma, Squamous Cell; N-Acetylneuraminic Acid; Lipid Peroxidation; Antioxidants; Saliva; Malondialdehyde; beta 2-Microglobulin

**Abstract:** Oral squamous cell carcinoma [OSCC] is considered to be a serious life threatening issue for almost two decades. The objective of this study was to evaluate the over production of lipid peroxidation [LPO] byproducts and disturbances in antioxidant defense system in the pathogenesis of oral cancer. Lipid peroxidation and antioxidant status in OSCC patients were estimated and compared the sensitivity and specificity of circulating biomarkers [MDA, Sialic acid, Catalase, SOD, GSH and Neuraminidase] with B-2 microglobulin [B-2MG] at different thresholds in blood and saliva using receiver operating characteristics [ROC] curve design. Our results showed that the levels of MDA and Sialic acid were significantly increased in plasma of OSCC patients as compared to healthy subjects whereas antioxidant level was significantly decreased. ROC analysis indicated that MDA in saliva is a better diagnostic tool as compared to MDA in blood and B-2MG in blood is better diagnostic marker as compared to B-2MG level in saliva.

## Multiplex Polymerase Chain Reaction

### Can we rely on the multiplex ligation-dependent probe amplification method [MLPA] for prenatal diagnosis?

Omrani, Mir Davood; Azizi, Faezeh; Rajabibazl, Masoumeh; Naini, Niloufar Safavi; Omrani, Sara; Abbasi, Arezo Mona; Gargari, Soraya Saleh

Shahid Beheshti University of Medical Sciences - Faculty of Medicine - Department of Clinical Genetics

*IJRM-Iranian Journal of Reproductive Medicine* 2014; 12 (4): 263-268 (28 ref.)

**Keywords:** Prenatal Diagnosis; Aneuploidy; Sensitivity and Specificity; Cross-Sectional Studies; Pregnancy

**Abstract:** The major aneuploidies that are diagnosed prenatally involve the autosomal chromosomes 13, 18, and 21, as well as sex chromosomes, X and Y. Because multiplex ligation-dependent probe amplification [MLPA] is rapid and non-invasive, it has replaced traditional culture methods for the screening and diagnosis of common aneuploidies in some countries. To evaluate the sensitivity and specificity of MLPA in a cross-sectional descriptive study for the detection of chromosomal aneuploidies in comparison to other methods. Genomic DNA was extracted from the peripheral blood samples of 10 normal controls and the amniotic fluid of 55 patients. Aneuploidies screening of chromosomes 13, 18, 21, X and Y were carried out using specific MLPA probe mixes [P095-A2]. For comparison purposes, samples were also tested by Quantitative Fluorescent-PCR [QF-PCR] and routine chromosomal culture method. Using this specific MLPA technique and data-analyzing software [Genemarker v1.85], one case was diagnosed with 45, X [e.g. Monosomy X or Turner's Syndrome], and the remaining 54 cases revealed normal karyotypes. These results were concordant with routine chromosomal culture and QF-PCR findings. The experiment demonstrates that MLPA can provide a rapid and accurate clinical method for prenatal identification of common chromosomal aneuploidies with 100% sensitivity and 100% specificity.

## Munchausen Syndrome by Proxy

### diagnosis

#### Munchausen syndrome by proxy.

Qureshi, Tabinda Naz; Aijaz, Nighat; Shamim, Samina

[E-mail:dr.tabindajiaz@yahoo.com](mailto:dr.tabindajiaz@yahoo.com)

Liaquat National Hospital and Medical College - Department of Paediatrics

*JCPSP-Journal of the College of Physicians and Surgeons Pakistan* 2014; 24 (5): 377-378 (6 ref.)

**Keywords:** Child Abuse

## Mycoses

### diagnosis

#### Gastrointestinal basidiobolomycosis first case report from Oman and literature review.

Al Maani, Amal S.; Paul, George; Jardani, Amina; Nayar, Madhavan; Al Lawati, Fatma; Al Baluishi, Sheikha; Hussain, Ibrahim B.

[E-mail:amalalmaani@yahoo.com](mailto:amalalmaani@yahoo.com)

Royal Hospital - Departments of Child

*SQUMJ-Sultan Qaboos University Medical Journal* 2014; 14 (2): 227-230 (15 ref.)

**Keywords:** Entomophthorales; Zygomycosis; Gastrointestinal Diseases; Review Literature as Topic; Child

**Abstract:** Gastrointestinal basidiobolomycosis [GIB] is a rare fungal infection with few reported cases worldwide. We report here the first case diagnosed in Oman in a previously healthy 5-year-old Omani female child who had been thought initially to have an abdominal malignancy. The case was referred to the Royal Hospital, Muscat, Oman, in July 2012. She was treated successfully with surgical resection and prolonged antifungal therapy [voriconazole]. Physicians, including clinicians, radiologists and pathologists, should have a high index of suspicion for GIB when a patient presents with an abdominal mass and fever.

## Myocardial Infarction

### drug therapy

#### **Comparison of the effects of enoxaparin and heparin on inflammatory biomarkers in patients with ST-segment elevated myocardial infarction: a prospective open label pilot clinical trial.**

Nasiripour, Somayyeh; Gholami, kheirollah; Mousavi, Sarah; Mohagheghi, Abbas; Radfar, Mania; Abdollahi Mohammad; Khazaeipour, Zahra; Mojtahedzadeh, Mojtaba

Tehran University of Medical Sciences and Health Services - Faculty of Pharmacy - Clinical Pharmacy Department

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 583-590 (51 ref.)

**Keywords:** Enoxaparin-pharmacology; Heparin-pharmacology; Inflammation; Biological Markers; Prospective Studies; Serum Amyloid A Protein; C-Reactive Protein; Interleukin-6-blood; Ferritins-blood; Peroxidase-blood

**Abstract:** Heparin and enoxaparin possess anti-inflammatory properties. We compared the effects of these drugs on inflammatory biomarkers in patients with ST-segment Elevated Myocardial Infarction [STEMI]. Thirty four patients with STEMI randomly separated in two groups and received standard doses of heparin and enoxaparin. The serum concentration of Serum Amyloid A [SAA], C-Reactive Protein [CRP], Interleukin [IL]-6, ferritin and Myeloperoxidase [MPO] were measured at baseline, 12, 24 and 48 hours after drug administration. Serum concentrations of SAA [P: 0.02], CRP [P: 0.02] and ferritin [P: 0.01] significantly reduced in heparin group during measurements compared to baseline, circulating levels of IL-6 [P: 0.002], SAA [P: 0.009], CRP [P: 0.01] were significantly decreased in enoxaparin group. The overall difference in inflammatory biomarkers between heparin and enoxaparin group was not significant. Both heparin and enoxaparin reduced serum levels of inflammatory biomarkers in patients with STEMI. This effect may provide additional clinical benefit of these drugs in the treatment of STEMI patients.

## Myocardial Ischemia

### blood

#### **ABO blood group frequency in ischemic heart disease patients in Pakistani population.**

Sharif, Saima; Anwar, Naureen; Farasat, Tasnim; Naz, Shagufta

Lahore College for Women University - Department of Zoology

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 593-595 (20 ref.)

**Keywords:** ABO Blood-Group System; Questionnaires

**Abstract:** To determine if there is any significant association between ABO blood groups and ischemic heart disease [IHD]. The study was performed at Punjab Institute of Cardiology [PIC], Lahore. Study duration was from January 2012 to September 2012. This study included 200 IHD patients and 230 control individuals. Self design questionnaire was used to collect information regarding risk factors. Standard agglutination test was performed to determine the blood groups. Data was analyzed on SPSS 16. The prevalence of blood groups in IHD group was 34% in blood group A, 29% in blood group B, 14% in blood group AB and 23% in blood group O. In control group the distribution of B, A, AB and O blood groups were 34.4%, 20.9%, 12.6%, 32.2% respectively. Rh+ve factor was prevalent in 90.5% among IHD group and 92.6% in control subjects. The prevalence of IHD was more in males [63.5%] as compared to females [36.5%]. Mean age was 56.4 +/- 0.86 [yrs] and BMI was 26.4±0.33 [kg/m<sup>2</sup>]. The prevalence of hypertension was 58.5%, diabetes was 53%, family history of cardiac disease was 45%, 35.5% of patients were doing exercise regularly, 58.5% used ghee, and 58% were smokers. Subjects with blood group A had significantly [p< 0.05] higher risk of developing IHD as compare to other blood groups.

## Natriuretic Peptide, Brain

### diagnostic use

#### **Diagnostic cut-off levels of plasma brain natriuretic peptide to distinguish left ventricular failure in emergency setting.**

Hussain, Arif; Lutfi, Irfan Amjad; Afridi, Faisal Iqbal

[E-mail:lab@zu.edu.ph](mailto:lab@zu.edu.ph)

Dr. Ziauddin University Hospital - North Nazimabad Campus - Department of Pathology

**JCPSP-Journal of the College of Physicians and Surgeons Pakistan** 2014; 24 (5): 304-307 (15 ref.)

**Keywords:** Natriuretic Peptide, Brain-blood; Heart Failure-diagnosis; Heart Ventricles; Emergency Service, Hospital; Dyspnea; Stroke Volume

**Abstract:** To determine the diagnostic cut-off values of brain natriuretic [BNP] peptide to establish left ventricular failure in patients presenting with dyspnoea in emergency department. Descriptive study. Ziauddin University Hospital, Karachi, from July to December 2011. BMP estimation was done on Axysm analyzer with kit provided by Abbott diagnostics, while the Doppler echocardiography was done on Toshiba istyle [UICW-660A] using 2.5 MHz and 5.0 MHz probes. Log transformation was done to normalize the original BNP values. A receiver operating curve was plotted to determine the diagnostic cut-off value of BNP which can be used to distinguish CHF from other causes of dyspnoea. Statistical analysis was performed by SPSS version 17. A total of 92 patients presenting with dyspnoea in the emergency department were studied. There were 38/92 [41.3%] males and 54/92 [58.7%] females, and the average age of the study population was 64 +/- 14.1 years. These patients had BNP levels and Doppler echocardiography done. The average BNP was found to be 1117.78 +/- 1445.74 pg/ml. In log transformation, the average was found to be 2.72 +/- 0.58. BNP value of 531 pg/ml was found to be the cut off to distinguish between cardiogenic and non-cardiogenic causes of dyspnoea. BNP value of 531 pg/ml can distinguish CHF from other conditions as a cause of dyspnoea in emergency.

## Neoplasm Proteins

### **Computational survey of FHIT, a putative human tumor suppressor, truncates structure.**

Eslamparast, Ameneh; Ghahremani, Mohammad Hossein; Sardari, Soroush  
Pasteur Institute of Iran - Biotechnology Research Center

**AJMB-Avicenna Journal of Medical Biotechnology** 2014; 6 (2): 64-71 (35 ref.)

**Keywords:** Acid Anhydride Hydrolases; Genes, Tumor Suppressor; Proto-Oncogene Proteins c-mdm2; Tumor Suppressor Protein p53

**Abstract:** Fragile Histidine Triad protein [FHIT], as a known tumor suppressor protein, has been proposed to play crucial role in inhibiting p53 degradation by MDM2. Studies have confirmed FHIT interaction with p53 or MDM2, although functional interacting domains of FHIT with MDM2 and/or p53 are not completely defined. Thus, through determining the significant structural interacting domains of FHIT, information with regard to MDM2 and p53 would be provided. As there were no previous studies evaluating the interaction of optimized important parts of target molecules, docking study was employed. Truncated structures of FHIT were screened to reveal critical sections engaging in FHIT interaction. HEX program was used in order to study the interaction of target structures. Given the total energy, FHIT structures [beta5-7, alpha1] and [alpha1] of FHIT were showed to be better candidates in comparison with other structures in interaction with optimized MDM2 part. Furthermore, FHIT structures [beta4-7, alpha1] and [beta5-7, alpha1] were considered to be better than other structures in interaction with optimized p53 part. FHIT truncates which interact with MDM2 optimized part exhibited lower energy levels than FHIT truncates which interact with p53 optimized part. Our results can be useful for designing new inhibitors of this protein complex interaction which would result in tumor repression.

## Neoplasms

### **The relationship between family history of cancer, coping style and psychological distress.**

Liu, Yu; Cao, Chunmei  
Tsinghua University - Department of Psych

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 507-510 (20 ref.)

**Keywords:** Adaptation, Psychological; Anxiety; Depression

**Abstract:** To investigate the relationship between family history of cancer, coping style and psychological distress. Total 80 patients with family history of cancer and 72 normal controls were analyzed using self-reporting inventory [SCL-90], coping style scale and impact of event scale-revised [IES-R]. Results: 1. Between the two groups of patients, there were significant differences in anxiety, depression, cancer-specific distress and coping style. 2. Psychological distress [anxiety, depression and cancer-specific distress] had positive correlation with negative coping style and family history. 3. Negative coping style played an intermediary role in the family history and psychological distress. The negative coping style will predispose to a more stronger psychological distress among the individuals with family history of cancer.

## Neuroma, Acoustic

### **diagnosis**

#### **Diagnostic accuracy of magnetic resonance imaging in detection of acoustic neuroma.**

Ahmad, Tanweer; Kanwal, Noreen; Ameer, Saima; Nasir, S. M.  
PGMI/ Lahore General Hospital - Department of Diagnostic Radiology

**Biomedica** 2014; 30 (1): 17-20 (31 ref.)

**Keywords:** Magnetic Resonance Imaging; Cerebellopontine Angle; Cross-Sectional Studies



**Abstract:** Acoustic neuroma is the most frequent benign tumour at cerebellopontine angle. It accounts for 8 - 10% of all primary intracranial tumours and 80% of Cerebellopontine angle tumours.[2] Meningioma constitutes 5 - 10% of Cerebellopontine angle tumors, with rare tumours constituting only a small percentage out of which epidermoid cyst is the most frequent. This study was performed to determine the diagnostic accuracy of magnetic resonance imaging in the detection of acoustic neuroma that is taking histopathology a gold standard. It is a cross sectional study conducted in the Department of Diagnostic Radiology, Lahore General Hospital, Lahore from 14-07-2012 to 14-07-2013. The study comprised of 55 patients with clinical suspicion of acoustic neuroma. Magnetic resonance imaging on a 1.5-T Philips whole body magnetic resonance system was performed. The cases were operated and histopathological results were recorded. The results of magnetic resonance imaging and histopathology were compared taking histopathology as gold standard. Out of 55 patients, 43 patients [78.2%] had acoustic neuroma on magnetic resonance imaging. After comparison of results of magnetic resonance imaging with histopathology, the sensitivity, specificity, positive predictive value, negative predictive value and diagnostic accuracy of magnetic resonance imaging were 97.7%, 91.7%, 97.7%, 91.7% and 96.4% respectively. Magnetic resonance imaging is a highly accurate, non-invasive, safe and convenient imaging modality for the evaluation of acoustic neuroma and is valuable for guiding surgical biopsies thereby decreasing unnecessary intervention. It allows detection of small tumors which is very useful in tumor characterization and plays an integral role in early detection, planning management and estimating patient's prognosis.

## Nicotine

### pharmacokinetics

#### The effect of maternal nicotine on basement membrane collagen IV of brain microvessels changes in neonatal Balb/C mice.

Tahajjodi, Somayyeh Sadat; Amerion, Maryam; Shahri, Nasser Mahdavi; Jalali, Mehdi; Nikravesh, Mohammad Reza  
*E-mail: s.tahajjodi@yahoo.com*

Research and Clinical Center for Infertility

**IJRM-Iranian Journal of Reproductive Medicine** 2014; 12 (4): 275-280 (32 ref.)

**Keywords:** Basement Membrane-drug effects; Collagen Type IV; Microvessels; Brain; Mice, Inbred BALB C; Animals, Newborn

**Abstract:** Nicotine can pass through placental blood barrier and accumulate in the developing organs of fetus. Also, entering the breast milk, nicotine can have an effect on the neonates. Investigations have showed that collagen IV is one of the most important micro vessels basement membrane components. In this study, the effect of maternal nicotine exposure in pre and postnatal periods on collagen IV in microvessels of neonatal Balb/C mice brain cortex was studied by immunohistochemistry technique. 24 pregnant Balb/C mice were divided in to 4 groups [6 mice in each group]: two experimental and 2 control groups. The mothers in the 1st experimental group were injected 3 mg/kg nicotine intraperitoneally from the 5th day of pregnancy to parturition daily and in 2nd experimental group the same procedure was repeated to the 10th day after parturition [lactation]. The control groups received the same volume of normal saline during the same time. 10 days after delivery, the brain tissues of newborns were isolated. Then, prepared blocks from fixed brain were cut serially for immunohistochemical assay. The findings of the present study indicated that collagen IV reaction in microvessels basement membrane in the first experimental group increased significantly compared to the first control group [p=0.002]. In addition, collagen IV reaction in microvessels basement membrane in the 2nd experimental group increased significantly compared to the 2nd control group [p=0.002]. However, no significant difference was observed between the two experimental groups. These results suggested that maternal nicotine exposure during prenatal period may increase basement membrane collagen IV expression. Also, nicotine increases in maternal breast milk has no effect on basement membrane collagen IV expression.

## Nigella sativa

#### Effect of Nigella sativa extract on renal functions in amphotericin B induced nephrotoxicity in mice.

Majeed, Nadia; Tahir, Mohammad  
 University of Health Sciences - Department of Anatomy

**Biomedica** 2014; 30 (1): 1-4 (31 ref.)

**Keywords:** Plant Extracts; Amphotericin B; Kidney-drug effects; Mice; Kidney Function Tests; Urea; Creatinine

**Abstract:** Amphotericin B is considered as one of the most effective antifungal drugs presently used to treat systemic fungal infections; however, nephrotoxicity remains the major side effect. The current study is therefore, designed to determine Amphotericin B induced nephrotoxicity and its prevention by administration of Nigella sativa [NS] extract in albino mice. Thirty two albino mice, 6-8 weeks of age, 30 +/- 5 gm body wt, were randomized into four groups of eight mice each. Group A [control] was injected 3.7 ml/kg of 5% dextrose solution intraperitoneally daily for 7 days. Group B was treated with Amphotericin B [18.5 mg/kg dissolved in 3.7ml 0/5% dextrose solution] intraperitoneally daily for 7 days. Group C received Amphotericin B [18.5 mg/kg dissolved in 3/ml of 5% dextrose solution] intraperitoneally along with Extract of Nigella sativa [500 mg/kg] orally daily for 7 days. Group D received Amphotericin B [18.5 mg/kg dissolved in 3.7 ml of 5% dextrose solution] intraperitoneally for initial 7 days; after completing the injection regimen,

extract of *Nigella sativa* 500 mg/kg was given orally daily for next 7 days. At the end of the experiment, cardiac puncture was performed to draw blood from each animal for renal function tests. *Nigella sativa* when co-administered with Amphotericin B significantly contained serum urea and serum weatinine levels [ $p < 0.001$ ] implying thereby that Amphotericin B induced nephrotoxicity was significantly reduced. However, when *Nigella sativa* extract was given after Amphotericin B, the toxic effects of the drug persisted unabated thus indicating that *Nigella sativa* protects but do not ameliorates the toxic effects of the drug.

## Noise

### **Designing a traffic noise prediction model for highways in Iranian megacities [case study: Ahvaz City]**

Esmaeelpour, M.R. Monazzam; Sekhavatjou, M.S.; Ahwazi, Z. Chabi  
Tehran University of Medical Science - Department of Professional Health Engineering  
**International Journal of Environmental Research** 2014; 8 (2): 427-434 (33 ref.)

**Keywords:** Motor Vehicles; Environment

**Abstract:** One of the important factors in urban construction designs is noise prevention. According to results of this study [2011-2012], a suggested model is presented for traffic noise compatible to conditions in Ahvaz. Data was collected to design a model from totally 112 measuring stations, 4 weekdays and 2 intervals as rush hours, yielding to a total number of 1344 traffic noise measurements [L] and the effective factors from traffic load, speed of vehicles, environmental and dimensional factors of roads. In the next step, based on desired overall structure, using analytical and experimental modeling strategies, several Regression multi-variables were tested on data in order to design a model. The model designed for Ahvaz consists of 9 inputs with high clarification coefficient [R<sup>2</sup>=0.92] and correlation coefficient [R= 0.95]. Due to precision and minuteness of designing as well as the number of inputs, the model can be a suitable one to define half- hour equal level for traffic noise and estimation of noise pollution in Ahvaz.

## Non-alcoholic Fatty Liver Disease

### **Hepatic artery and portal vein doppler indexes in non-alcoholic fatty liver disease before and after treatment to prevent unnecessary health care costs.**

Tarzamni, Mohammad Kazem; Khoshbaten, Manouchehr; Sadrarhami, Shohreh; Daneshpajouhnejad, Parnaz; Jalili, Javad; Gholamian, Masoud; Shahmoradi, Zahra  
Tabriz University of Medical Science - Imam Khomeini Hospital - Department of Radiology

**IJPM-International Journal of Preventive Medicine** 2014; 5 (4): 472-477 (26 ref.)

**Keywords:** Hepatic Artery-ultrasonography; Portal Vein-ultrasonography; Ultrasonography, Doppler; Health Care Costs

**Abstract:** We tested whether hepatic haemodynamics assessed by Doppler ultrasonography can be a predictor of response to therapy in patients with non-alcoholic fatty liver disease [NAFLD] to prevent further unnecessary diagnostic tests and interventions. Forty eight consecutive patients affected by NAFLD, who referred to some clinics in Tabriz, Iran between 2009 and 2011 were included in the study. Response to therapy was assessed by decrease in liver enzyme levels. Three liver Doppler parameters [hepatic artery resistance index [RI], hepatic artery pulsatility index [PI] and portal vein waveform [PVW]] were analysed in all subjects who showed a decrease in liver function tests results. Wilcoxon and paired student's *t*-test were used for analysis. Forty eight subjects with NAFLD were included in the study during 21 months, out of which 22 [39.1% male - mean age: 37.6 +/- 8.3] responded to the treatment and formed the basis of this study. Mean hepatic artery RI increased significantly from 0.60 +/- 0.07 to 0.83 +/- 0.27 before and after treatment, however, there was no significant differences between hepatic artery PI or PVW. Increase in hepatic artery RI assessed by Doppler ultrasound may provide information on improvement of NAFLD in patients during the course of therapy.

## Nutritional Status

### **Psychosocial determinants of nutritional neglect in a developing country.**

Mehnaz, Aisha; Shah, Nusrat; Mala, Ashfaq; Rai, Krishan; Arif, Fehmina; Munnawar, Uzma; Raj, Rakesh; Tariq, Abida; Yasin, Shahnaz

*E-mail: aishamehnaz@hotmail.com*

Dow University of Health Sciences [DUHS] - Civil Hospital - Department of Paediatrics

**JCPSP-Journal of the College of Physicians and Surgeons Pakistan** 2014; 24 (5): 335-339 (19 ref.)

**Keywords:** Psychology; Child Abuse; Child Nutrition Disorders; Developing Countries

**Abstract:** To determine the demographic features and psycho-social and economic determinants of nutritional neglect in order to suggest interventional strategies. Cross-sectional, observational study. Department of Paediatrics, Dow University of Health Sciences [DUHS] and Civil Hospital Karachi [CHK], from January 2009 to December 2010. All children suffering from nutritional neglect suggested by weight and height less than the third centile for age, and their

mothers were recruited in the study through non-probability consecutive sampling. A team comprising of paediatrician, psychologist, medical social worker and social motivator interviewed the mothers and children suffering from nutritional neglect. Information about demographic, social, economic and psychological factors was obtained. The results were analyzed and described as frequency distribution and percentage. A total of 658 children suffering from nutritional neglect were inducted. Around 75% of children were below 5 years of age, 51% were females. Other determinants of nutritional neglect were, large family size [family of > 5 members [84%] young mother [60%], uneducated parents [67%] father and 77% mothers being illiterate], low income [77% earning less than Rs. 7000/month], addiction [23%], tobacco smoking [50%] and non-nutritive substance use [51%]. Psychological indicators identified in mothers were depression [70%], anxiety [73%], helplessness [70%], displaced aggression [50%] and insecurity [36%]. Psychological factors identified in children as a secondary outcome were aggression [80%], rebellious behaviour [75%], lack of confidence [70%], lack of social interaction [70%] and paranoid tendencies [60%]. Psycho-social and economic factors are important determinants of neglect. A holistic approach and intervention at multiple levels is required to address these issues.

## Oryza sativa

### **Effect of brown rice consumption on inflammatory marker and cardiovascular risk factors among overweight and obese non-menopausal female adults.**

Kazemzadeh, Mahdieh; Safavi, Sayyed Morteza; Nematollahi, Shahrzad; Nourieh, Zeinab  
Isfahan University of Medical Sciences - School of Food Science and Nutrition - Food Security Research Center and Department of Nutrition

*IJPM-International Journal of Preventive Medicine* 2014; 5 (4): 478-488 (51 ref.)

**Keywords:** Inflammation; Cardiovascular System; Risk Factors; Overweight; Obesity; Adult; C-Reactive Protein

**Abstract:** Brown rice [BR] is unpolished rice with various beneficial compounds such as vitamins, magnesium and other minerals, dietary fiber, essential fatty acids, gamma-oryzanol and  $\gamma$ -aminobutyric acid. In the present study, we compared the effects of white rice [WR] and BR on inflammatory marker high-sensitivity C-reactive protein [hs-CRP] and cardiovascular risk factors among non-menopausal overweight or obese female. In a randomized cross-over clinical trial, 40 overweight or obese (body mass index [BMI] >25) women were randomly allocated to group 1 [n = 20]: Treatment with BR diet and group 2 [n = 20]: Treatment with WR diet for 6 weeks [first intervention period]. Two participants in group 2 dropped out during this period. After a 2-week washout period, individuals were switched to the alternate diet for an additional 6 weeks [second intervention period] and three subjects in group 2 did not follow this period and eliminated, finally this study was completed with 35 subjects [group 1 = 20 and group 2 = 15]. Each one was instructed to consume 150 g cooked WR or BR daily in each intervention period. Cardiovascular risk factors including BMI, waist and hip circumference, blood pressure, serum lipid profiles, fasting blood glucose [FBG] and hs-CRP as an inflammatory marker, were measured 4 times [in study week 0, 6, 8, 14]. BR diet in comparison with WR diet could significantly reduce weight, waist and hip circumference, BMI, Diastole blood pressure and hs-CRP. No significant differences between the two diets were found regarding lipid profiles and FBG. The present results suggest that BR replacement in the diet may be useful to decrease inflammatory marker level and several cardiovascular risk factors among non-menopausal overweight or obese female.

## Otomycosis

### epidemiology

#### **Otomycosis; clinical features, predisposing factors and treatment implications.**

Anwar, Khurshid; Gohar, Muhammad Shahid  
Combined Military Hospital

*Pakistan Journal of Medical Sciences* 2014; 30 (3): 564-567 (16 ref.)

**Keywords:** Otomycosis-diagnosis; Otomycosis-drug therapy; Clotrimazole; Salicylic Acid

**Abstract:** The aim of this study was to determine the frequency of Otomycosis, the clinical presentation, predisposing factors and treatment outcomes. This observational study was conducted at ENT department of Combined Military Hospital Attock, from October, 2010 to September, 2012. Convenient sample comprising 180 patients of both sexes and all age groups were selected from ENT OPD. The frequency, predisposing factors and most common symptoms of Otomycosis were recorded. The response to different antifungal agents was also observed. Results were recorded in percentages. There were 180 patients with documented diagnosis of Otomycosis. There were 107 [59%] males and 73 [41%] females. The age of patients ranged from V/i years to 75 years with a mean age of 38.5 years. Mean follow up time was 2 years. Most common presenting symptom was hearing loss [77.7%] followed by pruritis [68.8%] and otalgia [40%]. We prescribed 1% clotrimazole drops or lotion in 58% patients and 2% salicylic acid in 31% cases. Both of these agents are effective. Topical 1% clotrimazole drops yielded highest resolution rate with lowest recurrent rate. Overall 149 [83%] patients were improved with initial treatment and 31 [17%] did not respond to initial treatment. Eight [4.4%] patients had a history of otological procedures. Four [2.2%] patients had canal wall down procedures that resulted in mastoid cavity. To analyse the efficacy of 1% clotrimazole and 2% salicylic acid we applied Z-Test to calculate the difference between 2 proportions of patients before treatment with those patients who remained uncured

after treatment. Otitomycosis commonly presented with decreased hearing, pruritis, otalgia and otorrhoea. It usually resolves with local toilet of ear and instillation of antifungal agents. Eradication of disease is difficult in presence of a mastoid cavity and metabolic diseases like diabetes mellitus.

## Overweight

### epidemiology

#### **Overweight and obesity among children [10-13 years] in Bahrain: a comparison between two international standards.**

Musaiger, Abdulrahman O.; Al Mannai, Mariam; Al Marzog, Qazi

[E-mail:amusaiqer@gmail.com](mailto:amusaiqer@gmail.com)

Arab Center for Nutrition

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 497-500 (16 ref.)

**Keywords:** Obesity-epidemiology; Child; Prevalence

**Abstract:** Obesity has become one of the main public health problems worldwide. Childhood obesity rate is growing very fast in both developed and developing countries. This paper aimed to explore the prevalence of overweight and obesity among school children aged 10-13 years in Bahrain, and to find out the difference in this prevalence when using two international standards. A multistage stratified sampling procedure was used to select 2146 students [1068 males, 1078 females] from public schools in Bahrain. Weight and height were measured and Body Mass Index for age and sex was calculated to determine the obesity levels. Both International Obesity Task Force (IOTF) and World Health Organization [WHO] references were used to determine the prevalence of overweight and obesity. The findings revealed that the prevalence of overweight and obesity ranged from 15.7% to 28.9% among males and from 21.1% to 30.7% among females. The WHO reference standard provided higher prevalence of overweight and obesity than IOTF reference. The study confirmed that obesity is a problem of concern in Bahraini school children and calls for intervention programme to combat obesity in schools. However, the standard used to determine obesity levels should be carefully selected and interpreted.

## Pancreatitis

#### **Preventive effect of three pomegranate [*Punica granatum L.*] seeds fractions on cerulein-induced acute pancreatitis in mice.**

Minaiyan, Mohsen; Zolfaghari, Behzad; Taheri, Diana; Gomarian, Mahdi

[E-mail:minaiyan@pharm.mui.ac.ir](mailto:minaiyan@pharm.mui.ac.ir)

Isfahan University of Medical Sciences - School of Pharmacy and Pharmaceutical Sciences - Isfahan Pharmaceutical Sciences Research Center

**IJPM-International Journal of Preventive Medicine** 2014; 5 (4): 394-404 (53 ref.)

**Keywords:** Acute Disease; Punicaceae; Seeds; Ceruletide; Mice

**Abstract:** Acute pancreatitis [AP] refers to afflicted inflammation of pancreas with unfavorable adverse effects and developed multiple organ failures. Unfortunately, there is not a certain therapeutic method for this disease. Oxidative stress has a serious role in the pathogenesis of AP. Thus, decreasing of oxidative stress may prevent induction and progression of AP. *Punica granatum L.* has been extensively used in traditional medicine and possesses various active biological elements. Due to antioxidant and anti-inflammatory properties of pomegranate, it could be considered as a good candidate alternative medicine with beneficial effects on AP. In this study, we decided to study the protective effect of three fractions of pomegranate seeds on cerulein-induced AP. AP was induced in male Syrian mice by five intraperitoneal [i.p.] injection of cerulein [50 Mg/kg] with 1 h intervals. Treatments with pomegranate freeze-dried powder [PFDP] and hydroalcoholic pomegranate seeds extract [PSE] at doses of 125, 250, 500 mg/kg [i.p.] were started 30 min before pancreatitis induction. Pomegranate seed oil fraction [PSOF] was orally administered [50, 100, 200 ML/kg] and continued for 10 days. Pancreatic tissue was evaluated for histopathological parameters and pancreatic myeloperoxidase [MPO] activity as well as lipase and amylase levels were measured in plasma. The higher doses of three fractions [250 and 500 mg/kg for PFDP and PSE and doses of 100, 200 microL/kg for PSOF] significantly reduced amylase and lipase activity in serum [at least  $P < 0.01$ ], pancreatic MPO activity [ $P < 0.001$ ], edema, leukocyte infiltration and vacuolization in comparison to the control group [ $P < 0.05$ ]. These results propose that pomegranate seeds fractions can prevent and/or treat the AP.

## Papaveraceae

### Alkaloids from *Glaucium aleppicum* Papaveraceae.

Alali, Feras. Q.; Njadat, Rami M.; Mhaidat, Nizar M.; Alkofahi ,Ahmad S.; Al Gharaibeh, Mohammad M.; El Elimat, Tamam

[E-mail:falali@just.edu.iq](mailto:falali@just.edu.iq)

Jordan University of Science and Technology - Faculty of Pharmacy - Department of Medicinal Chemistry and Phannacognosy

**Jordan Journal of Pharmaceutical Sciences** 2013; 6 (3): 308-313 (18 ref.)

**Keywords:** Alkaloids; Methanol; Plant Extracts; Berberine Alkaloids; Benzophenanthridines; Aporphines

**Abstract:** Five alkaloids were isolated from the methanolic extract of the whole plant material of *Glaucium aleppicum* Boiss. and Hausskn. (Papaveraceae) using bioactivity-directed fractionation as part of a search for anticancer leads from medicinal plants of Jordan flora. Of these two were protopine-type alkaloids [alocryptopine [1] and protopine [2]], two were aporphine-type alkaloids [[+] -eorydine [4] and [-]-isocorydine [5]], and [+] -norchelidonine [3]. Compounds 3-5 were new to the species. The chemical structures of the isolated compounds were elucidated using a set of spectroscopic and spectrometric techniques, principally: MS, 1D-NMR [<sup>1</sup>H and <sup>13</sup>C] and 2D-NMR [COSY and HMQC]. Compounds 1-5 were tested for general cytotoxicity using BST. [+] -Norchelidonine was found to possess the highest activity with LC<sub>50</sub> value of 0.41 /microg/mL and hence evaluated for cytotoxicity against a human cancer cell panel. [+] -Norehelidonine induced antiproliferative activity against human melanoma MV3 and colorectal SW480 cancer cell lines in a dose-dependent manner with IC<sub>50</sub> values of 50 and 80 microg/mL, respectively.

## Papaverine

### pharmacology

#### Pancreatic lipase inhibition by papaverine: investigation by simulated molecular docking and subsequent in vitro evaluation.

Al Masri, Ihab M.

[E-mail:ihabalmasri@yahoo.com](mailto:ihabalmasri@yahoo.com)

Al Azhar University - Faculty of Pharmacy

**Jordan Journal of Pharmaceutical Sciences** 2013; 6 (3): 271-279 (32 ref.)

**Keywords:** Lipase-antagonists and inhibitors; Molecular Docking Simulation; In Vitro Techniques; Obesity

**Abstract:** In order to develop safe and effective lipid lowering drug that affecting the absorption of dietary lipids. the pancreatic lipase inhibitory effect of papaverine alkaloid was probed. The investigation included molecular docking to fit papaverine into the binding site of pancreatic lipase employing optimal set of parameters succeeded in retrieving the closest model to the cocrystallized pose. Docking simulation suggested four binding modes for papaverine. The highest ranking binding mode have potential hydrophobic interactions with the key amino acids Phe-215, Ala-178, Pro-180 and Ala-259 and potential aromatic stacking between isoquinoline ring and Phe-77 and Tyr-114. Moreover, papaverine forms strong hydrogen bonds with the key amino acid Ser-152 in the catalytic triad. Experimentally, papaverine illustrated substantial in vitro inhibitory effect against PL with IC<sub>50</sub> = 36.2 microg/ml [106.6 microM].

## Patients

#### A comparison of the scorings of real and standardized patients on physician communication skills.

Rezaei, Rita; Mehrabani, G.

[E-mail:mehrabad@sums.ac.ir](mailto:mehrabad@sums.ac.ir)

Shiraz University of Medical Sciences - Department of Medical Education

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 664-666 (15 ref.)

**Keywords:** Clinical Competence; Physicians; Communication; Questionnaires; Physician-Patient Relations

**Abstract:** To compare the scorings of real and standardized patients on physician communication skills. Patient scoring [n=183] on physicians' communication skills was determined by 93 real and 90 standardized patients. Eighty physicians [42 specialists and 38 general physicians] in private practice were enrolled. Data were analyzed using self administered questionnaires and checklists including 16 close ended questions. Twelve percent of patients were not satisfied with the physician communication skills. Poor communication skills were more reported by male patients and those with a higher educational level. The physician communication skill received a higher score with increase of age of patients. A good physician's communication skill was reported more by married patients. A good physician's communication skill was significantly more in female doctors, in general physicians and in doctors wearing a White Coat. Real patients scored physician's communication skills higher than standardized patients. It is important that physicians try to learn the principles of a good physician-patient communication skill. Therefore, providing medical educational programs on the role of a good doctor and patient relationship at all levels for the doctors and applying them in their clinical practice seem necessary to improve the physician communication skills.

## Peptic Ulcer Perforation

### therapy

#### Simple patch closure for perforated peptic ulcer in children followed by Helicobacter pylori eradication.

Yildiz, Turan; Ilce, Huri Tilla; Ceran, Canan; Ilce, Zekeriya

[E-mail:yildiz44@gmail.com](mailto:yildiz44@gmail.com)

Sakarya University Medical Schools - Department of Pediatric Surgery

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 493-496 (14 ref.)

**Keywords:** Duodenal Ulcer-complications; Child; Helicobacter pylori; Disease Eradication; Retrospective Studies

**Abstract:** Peptic ulcer disease in children is rare. Therefore, the diagnosis can be missed until complications such as perforation or hemorrhage occur. Few reports have investigated the procedures and outcomes of children who have undergone operations for perforated duodenal ulcers. We report our experience with the modified Graham technique for perforated duodenal ulcers in nine children and review the literature. The records of patients operated on for a perforated duodenal ulcer in the last 8 years in two pediatric surgery centers were evaluated retrospectively. Patient demographics, symptoms, time to admission to hospital, operative findings, and postoperative clinical course were evaluated. Nine children [mean age 13.2 years, range 6-170 years] were included. All patients were admitted in the first six hours after their abdominal pain started. In three patients, there was free air on plain x-rays, while the x-rays were normal in six. All perforations were located on the anterior surface of the first part of the duodenum and repaired with primary suturing and Graham patch omentoplasty. The recovery was uneventful in all patients. In five patients, urea breath tests were performed postoperatively for Helicobacter Pylori, and the results were positive. All patients underwent triple therapy with lansoprazole, amoxicillin, and clarithromycin. The mean follow-up time was 58 [range 3-94] months. Peptic ulcer perforation should be suspected in children who have acute abdominal pain and peritoneal signs, especially when their suffering is intense. The simple patch repair and postoperative triple therapy for Helicobacter Pylori are safe and satisfactory for treating peptic ulcer perforation in children.

## Perinatal Mortality

#### Re: perinatal mortality rate as a quality indicator of healthcare in Al-Dakhiliyah region, Oman.

Al Mendalawi, Mahmood D.

[E-mail:mdalmendalawi@yahoo.com](mailto:mdalmendalawi@yahoo.com)

Baghdad University - Al-Kindy College of Medicine - Department of Paediatrics

**SQUMJ-Sultan Qaboos University Medical Journal** 2014; 14 (2): 249-249 (5 ref.)

**Keywords:** Quality Indicators, Health Care; Consanguinity

## Persea

### toxicity

#### Acute toxicity investigation and anti-diarrhoeal effect of the chloroform-methanol extract of the leaves of persea americana.

Christian, E. Odo; Fc, Nwodo Okwesili; Parker, E, Joshua; Okechukwu Pc, Ugwu

[E-mail:christiano12@yahoo.com](mailto:christiano12@yahoo.com)

University of Nigeria - Department of Biochemistry, Pharmacology Research Unit

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 651-658 (27 ref.)

**Keywords:** Toxicity Tests, Acute; Antidiarrheals; Chloroform; Methanol; Plant Extracts; Plant Leaves; Butylscopolammonium Bromide; Rats, Wistar

**Abstract:** Persea americana is a plant used by traditional medicine practitioners to treat ailments including diarrhoea and diabetes mellitus in Nigeria. Hence, the chloroform and the methanol fractions of the chloroform-methanol extract of the leaves of P. americana were evaluated for their acute toxicity as well as anti-diarrhoeal effects in Wistar rats to substantiate this claim. The chloroform and methanol fractions [at graded doses of 100 and 200 mg/Kg body weight [b.w] of each] were studied for their anti-diarrhoeal effects in terms of the reductions in the wetness of faeces and the frequency of defaecation of castor oil-induced diarrhoea. To understand the mechanism of their anti-diarrhoeal effects, their actions were further evaluated on castor oil-induced enteropooling [intestinal fluid accumulation]. The median lethal dose [LD<sub>50</sub>] of the methanol fraction was found to be less than 5000 mg/Kg b.w. At the two doses, the chloroform and the methanol fractions showed dose-dependent significant [p < 0.05] reductions in the wetness of faeces and the frequency of defaecation with the 200 mg/Kg b.w of the chloroform fraction being the most effective. Results of the fractions were comparable with those of the standard anti-diarrhoeal drug, hyoscine butylbromide [3 mg/Kg b.w]. Both fractions produced remarkable [p < 0.05] dose-related inhibition of castor oil-induced enteropooling

as shown by the significant [ $p < 0.05$ ] decreases in the weight and volume of the intestinal contents. Experimental findings show that the chloroform-methanol extract of the leaves of *P. americana* possesses significant anti-diarrhoeal effect and may be a potent source of anti-diarrhoeal drug[s] in future.

## Petroleum

### **The biodegradation of crude oil by *Bacillus subtilis* isolated from contaminated soil in hot weather areas.**

Jalilzadeh Yengejeh, R.; Sekhavatjou, M.S.; Maktabi, P.; Arbab Soleimani, N.; Khadivi, S.; Pourjafarian, V.

*E-mail: r.jalilzadeh@khuzestan.srbiau.ac.ir*

Islamic Azad University - Khuzestan Science and Research Branch - Department of Environmental Engineering

**International Journal of Environmental Research** 2014; 8 (2): 509-514 (17 ref.)

**Keywords:** Biodegradation, Environmental; *Bacillus subtilis*; Soil; Weather; Environment; Surface-Active Agents

**Abstract:** Using Environmental-friendly methods in order to remove or reduce oil pollutants and their derivations in the environment are developing. In this study, the biodegrading ability of *Bacillus Subtilis* .sp which has been separated from oil-polluted soil was examined. It was revealed that it can reduce surface tension of growth Medium and produce Bio-Surfactant at 37 and 20 Degrees centigrade. Also, it has the ability to biodegrade oil hydrocarbons. A reduction in surface tension from 58 Nm/m to 31.2 Nm/m at different percentages of crude oil at 37 degrees centigrade is one of the important results.

## Petroleum Pollution

### **Modeling of oil spill and response in support of decreasing environmental oil effects case study: blowout from Khark subsea pipelines [Persian Gulf]**

Ranjbar, P.; Shafieefar, M.; Rezvandoust, J.

Tarbiat Modares University - Department of Civil and Environmental Engineering

**International Journal of Environmental Research** 2014; 8 (2): 289-296 (21 ref.)

**Keywords:** Indian Ocean; Petroleum; Oils; Environment

**Abstract:** This paper presents results analyses of specific potential blowout scenarios for subsea oil pipelines between the coast of mainland of Iran and Khark island in the Persian Gulf. The analyses have been carried out with the SINTEF Oil Spill Contingency and Response [OSCAR] 3-Dimensional model system. Some hypothetical three-day blowout scenarios with light and heavy Iranian oil have been investigated in this study. Results related to scenarios demonstrate that wind is the major agent for advection and spreading of oil in the area. Within a few days, a large part of oil will evaporate; significant part will pollute the marine environment by depositing at subsea as sediment and hit the area beach. Also some oil spill scenarios are investigated to evaluate potential effect of oil spill operation planning for response actions in decreasing potential consequences. Mechanical recovery equipment systems decrease the environmental potential effects of spilled oil but do not eliminate it completely. Also dispersant vessels and dispersant aircrafts actions decrease potential of surface effects, but result in increasing the oil in the water column and increasing deposited oil on the seabed. This study is an objective basis for analyses of planned response actions and strategies for decreasing environmental consequences of spilled oil on Khark island area.

## Pharmacists

### **A clinical trial to investigate the role of clinical pharmacist in resolving/preventing drug related problems in ICU patients who receive anti-infective therapy.**

Abu Oliem, Attallah Saleh; Al Sharayri, Mohammad Ghassan; Al Jabra, Rabi'a Jamil; Hakuz, Neris Musa

Jordan Royal Medical Services

**Jordan Journal of Pharmaceutical Sciences** 2013; 6 (3): 292-298 (14 ref.)

**Keywords:** Pharmaceutical Preparations; Anti-Infective Agents; Intensive Care Units

**Abstract:** To highlight the role of the clinical pharmacist in resolving/preventing drug related problems and to measure the acceptance of the pharmaceutical care plan for patients who receive anti-infective therapy in the intensive care unit. Two groups of patients were randomly selected from general intensive care unit ward of the King Hussein Medical Center. Royal Medical Services, Amman, Jordan ; Intervention group, n=52 and control group, n=50. The intervention group received complete pharmaceutical care services. Consult notes were written to identify drug related problems according to a pharmacy care plan. Clinical pharmacist's recommendations for the intervention group were submitted to and discussed with physicians. Acceptance rate of the recommendations was then measured. A total of 251 drug related problem were identified for both groups. For the intervention group, the physicians' acceptance rate of the submitted recommendations was very high [around 98%]. Clinical pharmacist plays a key role as member of multidisciplinary team as he is able to assess the patient's medication treatment from different aspects during intensive care unit stay; consequently, physicians are increasingly accepting the clinical pharmacist recommendations regarding drug related problems for patients in intensive care unit.

## Phenylethyl Alcohol

### analogs and derivatives

#### Analysis and evaluation of hydroxytyrosol in olive leaf extract.

Alzweiri, Muhammed; Al Hiari, Yusuf M.

[E-mail:m.alzweiri@ju.edu.jo](mailto:m.alzweiri@ju.edu.jo)

University of Jordan - Faculty of Pharmacy - Department of Pharmaceutical Sciences

**Jordan Journal of Pharmaceutical Sciences** 2013; 6 (3): 314-322 (30 ref.)

**Keywords:** Olea; Plant Leaves; Plant Extracts; Antioxidants

**Abstract:** There is a group of phenolic compounds and their glycosidic forms responsible of antioxidant effect in the olive leaf extract. Hydroxytyrosol is one of these compounds considered as building unit for the other phenolic molecules in the extract. A normal phase chromatographic method was established for analysis of hydroxytyrosol. It generates clean chromatograms suitable for analytical and preparative purposes and better resolved than those obtained from reversed phase systems. Mobile phase of [1:1] acetonitrile and 1% acetic acid aqueous solution was used. Flow rate was kept constant at 0.5 mL/min. Injection volume was 20  $\mu$ L and UV detector was set at  $\lambda=280$  nm. The developed HPLC method was found linear within the range of 0.82-4.12 mg%, precise with RSD less than 2% and accurate with a range of 97.6-101.2%. LOQ and LOD of the method were calculated to be 8 and 0.8  $\mu$ g/ml respectively. Furthermore, antioxidant degree of hydroxytyrosol and its derivatives in the extract was evaluated by Follin-ciocalteu's reagent and found equivalent to 40 mg gallic acid.

## Pheochromocytoma

### drug therapy

#### Successful management of phaeochromocytoma using preoperative oral labetalol and intraoperative magnesium sulphate report of four cases.

Kumar, B. S. Sanath; Date, Rohit; Woodhouse, Nicholas; El Shafie, Omayma; Nollain, Karin

[E-mail: sanathkumarbs@yahoo.com](mailto:sanathkumarbs@yahoo.com)

Sultan Qaboos University - College of Medicine and Health Sciences - Department of Anaesthesia and Intensive Care

**SQUMJ-Sultan Qaboos University Medical Journal** 2014; 14 (2): 222-226 (23 ref.)

**Keywords:** Labetalol-therapeutic use; Preoperative Care; Magnesium Sulfate-therapeutic use; Intraoperative Care; Administration, Oral; Disease Management; Phenoxybenzamine; Phentolamine; Adrenal Gland Neoplasms

**Abstract:** Phaeochromocytoma is a rare neuroendocrine catecholamine-secreting tumour. This type of tumour poses multidimensional anaesthetic challenges as it has an unpredictable clinical course during surgical resection. The alpha-blocking agent phenoxybenzamine remained the mainstay in preoperative preparation before the introduction of beta-blocking agents. We report four cases operated between 2009-2012 at Sultan Qaboos University Hospital, Muscat, Oman. The cases were prepared with oral labetalol, as the alpha-blocking drug phenoxybenzamine was not immediately available. Responses to simulated stress were tested in the theatre before surgery. Anaesthesia was induced under invasive arterial pressure monitoring and magnesium sulphate infusion. Rare intraoperative surges in blood pressure during tumour manipulation were treated with sodium nitroprusside infusions and phentolamine boluses. All of the patients had an uneventful postoperative recovery. Preoperative treatment with labetalol has rarely been reported and can be considered as a potential therapeutic option with optimal patient monitoring if phenoxybenzamine is unavailable.

## Placenta Diseases

### surgery

#### Hysterectomy as a management option for morbidly adherent placenta.

Ansar, Afia; Malik, Tooba; Shuja, Samia; Khan, Saba

[E-mail:afiajpmc3@yahoo.com](mailto:afiajpmc3@yahoo.com)

Jinnah Postgraduate Medical Centre - C-2 Doctors' Colony

**JCPSP-Journal of the College of Physicians and Surgeons Pakistan** 2014; 24 (5): 318-322 (20 ref.)

**Keywords:** Hysterectomy; Cesarean Section; Pregnancy; Placenta; Disease Management

**Abstract:** To determine the outcome of interval [delayed] hysterectomy as compared to cesarean [immediate] hysterectomy in cases of placental invasion in previous cesarean sections. Comparative study. Department of Obstetrics and Gynecology, Unit II, Jinnah Postgraduate Medical Centre, Karachi, Pakistan, from January 2008 to June 2011. The study subjects included 28 women with history of previous cesarean section who had low lying as well



as morbidly adherent placenta [MAP] of variable degree. Patients were classified into two groups [group A and B] according to whether cesarean or interval hysterectomy was needed at time of delivery. Demographic data, obstetrical risk factors such as parity and number of previous cesarean sections were compared as well as radiological and histopathological findings, and details of the management. Chi-square, Fisher's exact and t-tests were used to compare proportions and mean values. The frequency of MAP in previous cesarean sections turned out to be 1.83/1000 [28/15,340] deliveries. Mean maternal age [26.54 vs. 29.13 years,  $p=0.05$ ], mean gestational age [33.8 vs. 36 weeks,  $p=0.05$ ], estimated blood loss [2615.38 vs. 1506.6 ml,  $p=0.001$ ], volume of blood transfused [9.76 vs. 2.9 pints,  $p=0.001$ ] and the duration of hospital stay [10.69 vs. 32.86 days,  $p=0.001$ ] differed significantly between group A and group B. One maternal death occurred in each group. Eight patients had other complications in group A compared to 3 patients in group B. Three neonatal deaths occurred in group A compared to nil in group B. The frequency of morbidly adherent placenta was 1.83/1000 deliveries. The management and outcome differed markedly according to emergency and scheduled antenatal diagnosis. Counselling and antenatal radiological screening can reduce the high morbidity and mortality associated with it.

## Plant Extracts

### Formulation and evaluation of poly herbal formulation against CCl<sub>4</sub> induced hepatotoxicity.

Rasheed, Arun; Reddy, B. Sravya; Roja, C.; Azeem, A.K.

*E-mail: arunrasheed@rediffmail*

Al Shifa College of Pharmacy - Department of Pharmaceutical Chemistry

**Jordan Journal of Pharmaceutical Sciences** 2014; 7 (1): 67-76 (20 ref.)

**Keywords:** Phytotherapy; Carbon Tetrachloride-toxicity; Liver-drug effects; Aegle; Eclipta; Phyllanthus; Rats, Wistar

**Abstract:** Aegle marmelos L, Eclipta alba L. and Phyllanthus amarus are well known herbs as hepatoprotective agents. The preventive effects of polyherbal formulation containing the above herbs were evaluated against carbon tetra chloride [CCl<sub>4</sub>] induced hepatotoxicity in rats. CCl<sub>4</sub> induced fatty degeneration and vacuole formation and significantly increased the levels of alanine aminotransferase [ALT] and aspartate aminotransferase [AST] in rat's plasma. Treatment with the herbal formulation significantly decreased the levels of AST and ALT in plasma. Also histopathological studies showed that the formulation reduced the incidence of liver lesions induced by CCl<sub>4</sub>. The study proved that the formulation prepared from A. marmelos, P. amarus and E. alba may be used in the treatment of CCl<sub>4</sub> induced hepatotoxicity.

## Plants, Medicinal

### HPTLC analysis, antioxidant and antigout activity of Indian plants.

Nile, Shivraj Hariram; Park, Se Won

Konknk University - College of Life and Environmental Sciences - Department of Molecular Biotechnology

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 531-539 (31 ref.)

**Keywords:** Chromatography, Thin Layer; Chromatography, High Pressure Liquid; Antioxidants; Gout Suppressants; Xanthine Oxidase; Plant Extracts

**Abstract:** The HPTLC analysis, antioxidant. and antigout activity of *Asparagus racemosus*, *Withania somnifera*, *Vitex negundo*, *Plumbago leylanica*, *Butea monosperma* and *Tephrosia purpurea* extracts were investigated. The chemical fingerprinting were carried out by high performance thin layer chromatography [HPTLC]. antioxidant activity by ABTS, DPPH. FRAP radical scavenging assays, and antigout activity by cow milk xanthine oxidase. The HPTLC fingerprint qualitatively revealed predominant amount of flavonoids. The TEAC values ranged from 45.80 to 140 microM trolox/100 g dry weight for ABTS, from 85 to 430 microM trolox/ 100 g dw DPPH, and 185 to 560 microM trolox/100 g dw for FRAP respectively. Plants used in this study was found to inhibit the toxicity. as seen from the decreased LPO and increased GSH. SOD and CAT levels. The total phenolic and flavonoid content ranged from 10.21 to 28.17 and 5.80 to 10.1 mg of gallic acid equivalents [GAE]/100 gdw respectively. The plant extracts demonstrated significant xanthine oxidase inhibitory activity at 100 g/mL and revealed an inhibition greater than 50% and IC-[50] values below the standard. This effect was almost similar to the activity of allopurinol [Standard drug] against xanthine oxidase [90.2 + 0.4%]. These plant root extract will be subjected for further extensive studies to isolate and identify their active constituents which are useful for against inflammation and gout.

## Polyarteritis Nodosa

### Cutaneous polyarteritis nodosa.

Jiang, Guan; Liu, Wen Lou; Liu, Yan Qun; Wei, Zhi Ping

Affiliated Hospital of Xuzhou Medical College - Department of Dermatology

**JCPSP-Journal of the College of Physicians and Surgeons Pakistan** 2014; 24 (5): 373-374 (7 ref.)

**Keywords:** Skin; Skin Ulcer

## Polycyclic Hydrocarbons, Aromatic

### **Environmental behavior of PAHs in Dianchi lake distributions, sources and risk assessment of polycyclic aromatic hydrocarbons in surface sediments from Dianchi lake, China.**

Zhao, S.M.f; Wang, B.; Wang, D.W.; Li, X.M.; Huang, B.; Hu, P.; Zhang, L.W.; Pan, X.J.J.  
Kunming University of Science and Technology - Faculty of Environmental Science and Engineering  
**International Journal of Environmental Research** 2014; 8 (2): 317-328 (54 ref.)

**Keywords:** Geologic Sediments; Lakes; Risk Assessment; Environment

**Abstract:** Polycyclic aromatic hydrocarbons [PAHs] in the priority controlling list of US EPA were systematically evaluated in surface sediments in Dianchi Lake and its estuaries. Total PAH concentrations [IPAHs] varied from 210 to 11,070 ng/g dry weight [d.w] in Dianchi Lake, and from 230 to 12,271 microg/g d.w. in the estuaries. IPAHs in sediments from Caohai section were higher than those from Waihai section. The occurrences of PAHs in the Lake were closely related to the distributions of rivers, indicating that the river runoff was an important pathway of PAHs into the Lake. Compared with the US Sediment Quality Guidelines [SQGs], IPAHs in most area were below the effect range low [ERL], which implied that the adverse biological effects would occur rarely. The toxic equivalent concentrations of potentially carcinogenic PAHs [TEQ[carc]] varied from 19 to 967 ng TEQ/g d.w., and the higher values were found in northern Caohai area. The proportions of the toxic equivalent quantity [TEQ[carc]] to the total TEQs in sediments were all above 96%, suggesting that the carcinogenicity of PAHs could be occurred. Significantly positive correlations between total organic carbon [TOC] and less molecular weight PAHs [2-, 3-ring] [LPAHs] were observed in the Lake. Diagnostic ratios showed that the primary source of PAHs in Dianchi Lake and most estuaries is biomass combustion, but is petroleum combustion or petrogenic origin in several other estuaries.

### **Evaluation of PAHs in hydrocarbons pollution, biodegradation and weathering extent in surface sediments of the Kharg Island in the Persian Gulf.**

Mirvakili, H.S.; Zaker, N. Hadjizadeh

[E-mail:vakili@gmail.com](mailto:E-mail:vakili@gmail.com)

University of Tehran - Graduate Faculty of Environment

**International Journal of Environmental Research** 2014; 8 (2): 387-394 (26 ref.)

**Keywords:** Hydrocarbons; Biodegradation, Environmental; Geologic Sediments; Indian Ocean; Petroleum Pollution

**Abstract:** Kharg Island as the most important oil export terminal of Iran has faced entrance of various oil materials, so it seems necessary to know about the amount of these marine oil pollutants and their origin in this area. Oil hydrocarbons has entered in this water body as a result of numerous human activities like extraction, refinement, transmission and export of raw oil or from natural and biologic resources. The oil contamination has damaged the environment according to the different decomposed level of compounds which exist in diverse oil pollutants. The concentration of polycyclic aromatic hydrocarbons using sediment sampling across the coast was determined and compared the obtained concentrations with previous values. The observed PAH concentrations were obtained in the range between 9 to 1230 ng/g and indicated the more focus of PAHs in the eastern region of Kharg Island coast. In addition to investigating the sediment oil pollution by PAHs, this paper has attempted to determine the origin of aromatic compounds by developing a set of indexes. These indexes suggested that PAH concentrations have obtained from the combustion origin of hydrocarbons in the sediments, and have entered to the coastal sediment of Island by active flares that burn the sour gas by oil around the coast. Indices developed also corroborate the presence of degraded oil residue, high relative biodegradation and a degree of weathering of hydrocarbons in the surface sediment of the area, which suggest a chronic input of oil-related hydrocarbons in the neighborhood of the study region.

## Polynuropathies

### **diagnosis**

#### **A rare case of critical illness polyneuropathy and literature review.**

Feng, Jiachun; Jiang, Xinmei; Fang, Shaokuan

The First Teaching Hospital of Jilin University - Department of Neurology

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 671-673 (4 ref.)

**Keywords:** Systemic Inflammatory Response Syndrome; Muscles-pathology; Nervous System-pathology; Biopsy; Review Literature as Topic

**Abstract:** A 40-year-old Male was admitted to the first hospital of Jilin University with the complaint of 4 days of fever and headache and aggravation of weakness in his lower extremities accompanied with dysuria and disturbance of consciousness for one day. He had tachycardia, tachypnea and elevated white blood cell counts. General status of the patient got better day by day, while weakness and pain in his lower extremities had developed and gradually quadriplegia arose. When intensive care unit history, weaning difficulty from mechanical ventilator, clinical manifestations in intensive care unit associated with SIRS, symmetrical paresis pronounced in distal lower extremities, absence of deep tendon reflexes, evidence of distal sensory impairment, presence of electrophysiologic results indicating axonal sensorimotor polyneuropathy and muscle and nerve biopsy results were taken into consideration, he was diagnosed as critical illness polyneuropathy.

## Pre-Eclampsia

### blood

#### **The role of maternal serum beta-HCG and PAPP-A levels at gestational weeks 10 to 14 in the prediction of pre-eclampsia.**

Ozdamar, Ozkan; Gun, Ismet; Keskin, Ugur; Kocak, Necmettin; Mungen, Ercument

*E-mail: ozkan\_ozdamar35@hotmail.com*

Golcuk Military Hospital - Department of Obstetrics and Gynecology

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 568-573 (23 ref.)

**Keywords:** Chorionic Gonadotropin, beta Subunit, Human-blood; Pregnancy-Associated Plasma Protein-A; Nuchal Translucency Measurement; Pregnancy Trimester, First; Retrospective Studies; Case-Control Studies

**Abstract:** We aimed to detect whether maternal serum free B-hCG and PAPP-A levels and NT measurements vary between normal pregnancies and those that subsequently develop pre-eclampsia and to evaluate the role of these screening serum analytes in the prediction of pre-eclampsia. Using a case-control study design, we identified all women who had been screened by double test within 11+0 and 13+6 weeks of gestation and who had developed pre-eclampsia during the subsequent pregnancy course, over a 6-year period between January 2006 and December 2012 at two tertiary referral hospital. All women who had undergone a double test during that time, without a diagnosis of pre-eclampsia and who had not had any adverse obstetric outcomes, were also identified, and three women among them were randomly selected as controls for each case. Maternal and neonatal data were abstracted from the medical records and PAPP-A, B-hCG, NT and CRL MoM values were compared between the two groups. Although B-hCG values show no statistically significant difference [ $p=0.882$ ], PAPP-A levels were significantly reduced in the pre-eclampsia group compared to the control group [ $p < 0.001$ ]. NT and CRL values showed no significant difference between the two groups [ $p=0.674$  and  $p=0.558$ , respectively]. Measuring PAPP-A in the first trimester may be useful in the prediction of pre-eclampsia.

## Pregnancy, Ectopic

### diagnosis

#### **Ovarian ectopic pregnancy: a rare case.**

Tehrani, Hatav Ghasemi; Hamoush, Zaynab; Ghasemi, Mojdeh; Hashemi, Leila

Isfahan University of Medical Sciences - Shahid Beheshti Hospital - Department of Obstetrics and Gynecology

**IJRM-Iranian Journal of Reproductive Medicine** 2014; 12 (4): 281-284 (29 ref.)

**Keywords:** Pregnancy; Ovary; Intrauterine Devices; Laparotomy; Disease Management

**Abstract:** Ovarian pregnancy is a rare form of the non-tubal ectopic pregnancy. It ends with rupture before the end of the first trimester. One of the important risk factors for ovarian pregnancy is in the use of Intra uterine devices [IUD]. We report here one such uncommon case of ovarian ectopic pregnancy. Our patient is a 30 years old multiparous woman with two previous cesarean sections with severe hypogastric abdominal pain. During laparotomy, ruptured ovarian ectopic pregnancy was diagnosed, and wedge resection of the ovary was only done. Histopathological examination confirmed it to be an ovarian ectopic pregnancy. IUD is one of contraceptive methods which prevents intra-uterine implantation in 99.5%, if implant occurs with IUD, it is tubal implantation in 95% of cases, and it is very rare in other places such as ovary. The most important risk factor of ovarian ectopic pregnancy is IUD as in this study it was showed.

### therapy

#### **Management of cervical ectopic pregnancy after unsuccessful methotrexate treatment.**

Sijanovic, Sinisa; Vidosavljevic, Domagoj; Topolovec, Zlatko; Milostic Srb, Andrea; Mrcela, Milanka

JJ. Strossmeyer University School of Medicine - Cathedra for Gynaecology and Obstetrics

**IJRM-Iranian Journal of Reproductive Medicine** 2014; 12 (4): 285-288 (19 ref.)

**Keywords:** Pregnancy; Cervix Uteri; Methotrexate; Disease Management; Hysteroscopy

**Abstract:** Cervical pregnancy is rare and dangerous form of ectopic pregnancy which can be treated surgically or conservatively. Methotrexate is reasonable conservative option with high efficiency and acceptable level of side effects. Aim of this paper is to present possible treatment option in case of methotrexate failure, still keeping the postulates of minimal invasive surgery. We describe a case of cervical ectopic pregnancy in nulliparous female that was unsuccessfully treated with single dose, local, ultrasound guided intraamniotic methotrexate. Due to vaginal bleeding caused by remaining products of conception a hysteroscopic resection was performed. Despite the problems that can occur in methotrexate treatment, it is still by far, cheapest and most effective treatment of cervical pregnancies. If necessary, procedure can be combined with other minimal invasive surgical procedures leading to satisfactory results. Hysteroscopic resection has enabled us to remove the product of conception from cervix making the minimal damage to the local tissue, thus preserving fertility.

## Pregnancy, Triplet

### Maternal and fetal outcomes of triplet gestation in a tertiary hospital in Oman.

Al Shukri, Maryam; Khan, Durdana; Al Hadrami, Atka; Al Riyami, Nihal; Gowri, Vaidyanathan; Haddabi, Rahma; Abdellatif, Mohammed; Al Dughaisi, Tamima

[E-mail:gowri@squ.edu.om](mailto:gowri@squ.edu.om)

Sultan Qaboos University - Sultan Qaboos University Hospital - Departments of Obstetrics and Gynaecology

**SQUMJ-Sultan Qaboos University Medical Journal** 2014; 14 (2): 190-196 (27 ref.)

**Keywords:** Pregnancy; Pregnancy Outcome; Fetus; Mothers; Tertiary Care Centers; Retrospective Studies; Obstetric Labor, Premature; Perinatal Mortality; Diabetes, Gestational; Hypertension, Pregnancy-Induced; Hyaline Membrane Disease; Hyperbilirubinemia; Sepsis; Anemia

**Abstract:** The aim of this study was to describe the fetal and maternal outcomes of triplet gestation and to report on the maternal characteristics of those pregnancies in a tertiary care centre in Oman. A retrospective study was undertaken of all triplet pregnancies delivered at Sultan Qaboos University Hospital, Muscat, Oman, between January 2009 and December 2011. Over the three-year study period, there were 9,140 deliveries. Of these, there were 18 triplet pregnancies, giving a frequency of 0.2%. The mean gestational age at delivery was 31.0 +/- 3.0 weeks, and the mean birth weight was 1.594 +/- 460 g. The most common maternal complications were preterm labour in 13 pregnancies [72.2%], gestational diabetes in 7 [39%] and gestational hypertension in 5 [28%]. Of the total deliveries, there were 54 neonates. Neonatal complications among these included hyaline membrane disease in 25 neonates [46%], hyperbilirubinaemia in 24 [43%], sepsis in 18 [33%] and anaemia in 8 [15%]. The perinatal mortality rate was 55 per 1,000 births. The maternal and neonatal outcomes of triplet pregnancies were similar to those reported in other studies.

## Pressure Ulcer

### epidemiology

#### Pressure ulcer prevalence among hospitalized children in Jordan.

Al Ashhab, Shereen; Saleh, Mohammad Y.N.; Nabolssi, Manar; Al Horani, Eman

The University of Jordan - Faculty of Nursing - Department of Maternal and Child Health

**Jordan Medical Journal** 2013; 47 (3): 241-252 (23 ref.)

**Keywords:** Prevalence; Child, Hospitalized; Pediatrics; Sacrum

**Abstract:** Pressure Ulcers [PUs] remain a significant and complex health problem in health care settings. It is related to human suffering, pain, disfigurement, and financial burden. Only few studies about PUs incidence and prevalence have focused on paediatric patients whereas PUs prevention and management are generally extrapolated from the adult population. Determining PUs prevalence among children in Jordan and exploring the allocation of prevention measures to at risk populations. A point prevalence survey was conducted on 784 inpatient children in university, private and governmental hospitals in Jordan. A modified European Pressure Ulcer Advisory Panel [EPUAP] PUs prevalence survey form was used. PUs were classified according to the 2009 EPUAP and the National Pressure Ulcer Advisory Panel [NPUAP] grading system. Risk of PUs development was assessed using the 2009 Glamorgan scale for risk assessment in paediatrics. The overall PUs prevalence was 8.2% [n=58] and decreased to 1.8% when Grade I was excluded. The sacrum was the most often affected site [75.8%, n=44 of 58]. For the various at risk sub groups, paediatric critical care and surgical units showed the highest PUs prevalence of 43.1% and 36.2%, respectively. Of the 400 children evaluated to be at risk of PUs development, only 10% received prevention in terms of equipment and/or repositioning. The PUs prevalence among children in Jordan is comparable to that reported for other countries utilizing the same methodology. Despite relatively low PUs prevalence, few patients at risk received adequate prevention. Since PUs risk assessment scales are not frequently used in Jordan, there is a need to emphasize knowledge of prevention and interventions as a key to reducing PUs prevalence.

## Prostate

### pathology

#### Prostatic abscess MRI findings: case report.

Samara, Osama A.; Farah, Waleed M.; Tarabieh, Obada M.; Murshidi, Mujalli M.

[E-mail:osama\\_samara@yahoo.com](mailto:osama_samara@yahoo.com)

University of Jordan Hospital - Department of Diagnostic Radiology

**Jordan Medical Journal** 2013; 47 (3): 266-272 (9 ref.)

**Keywords:** Prostatic Diseases; Abscess; Magnetic Resonance Imaging; Dysuria

**Abstract:** Prostatic abscesses are a rare complication of acute prostatitis, and an uncommon clinical entity in the antibiotic era. Despite their rarity, untreated abscesses still remain potentially life-threatening, and require formal drainage to permit resolution. Here in, we report the MRI findings in 73 - years old man who presented with severe dysuria of two weeks duration . He was found to have multiple prostatic abscesses which was surgically drained.

## Prostatic Hyperplasia

### diagnosis

#### **Giant prostatic hyperplasia fourth largest prostate reported in medical literature.**

Maliakal, Joseph; Mousa, Emad E.; Menon, Varna

*E-mail: joseph.maliakal@gmail.com*

Sohar Hospital - Department of Urology

**SQUMJ-Sultan Qaboos University Medical Journal** 2014; 14 (2): 239-242 (18 ref.)

**Keywords:** Prostate; Prostatectomy

**Abstract:** A giant prostatic hyperplasia [GPH] weighing more than 700 g is a rare entity. It is believed that only eight such cases have been previously reported in the medical literature. This case report concerns a patient with a GPH weighing 740 g which was successfully removed by suprapubic prostatectomy. To our knowledge, this is the fourth largest benign prostatic enlargement ever reported in the literature.

## Pseudoephedrine

### analysis

#### **Simultaneous quantification of pseudoephedrine hydrochloride and fexofenadine hydrochloride in tablets by liquid chromatography.**

Induri, Madhusudhanareddy; Fathima, A.; Raju M., Bhagavan; Prasad Y. Rajendra

*E-mail: msreddyinduri@yahoo.com*

JNTU Kakinada - Research Scholar

**Jordan Journal of Pharmaceutical Sciences** 2013; 6 (3): 323-329 (10 ref.)

**Keywords:** Terfenadine-analogs and derivatives; Tablets; Chromatography, Liquid; Chromatography, High Pressure Liquid

**Abstract:** An accurate and precise liquid chromatographic method was developed for the simultaneous estimation of pseudoephedrine hydrochloride and fexofenadine hydrochloride in tablets. The chromatographic analysis was performed on XTerra symmetry C8 column [250 × 4.6 mm, 5 μ particle size] with mobile phase consisting of methanol and sodium di-hydrogen ortho phosphate buffer [pH 2.8] in the ratio of 60:40 v/v, at a flow rate of 1.0 mL/min and eluents monitored at 219 nm. The calibration curves of peak area versus concentration, which was linear from 20-100 [microg/mL for pseudoephedrine hydrochloride and 10-50 microg/mL for fexofenadine hydrochloride, had regression coefficient [r<sup>2</sup>] greater than 0.999. The method had the requisite accuracy, precision, and robustness for simultaneous determination of paracetamol and meloxicam in tablets. The proposed method is simple, economical, accurate, and precise and could be successfully employed in routine quality control for the simultaneous analysis of pseudoephedrine hydrochloride and fexofenadine hydrochloride in tablets.

## Receptors, N-Methyl-D-Aspartate

### antagonists and inhibitors

#### **Inhibition of NR2B-containing N-methyl-D-aspartate receptors [NMDARs] in experimental autoimmune encephalomyelitis, a model of multiple sclerosis.**

Farjam, Mojtaba; Zarandi, Faegheh Baha'addini Beigi; Farjadian, Shirin; Geramizadeh, Bitia; Nikseresht, Ali Reza; Panjehshahin, Mohammad Reza

Fasa University of Medical Sciences - School of Medicine - Department of Medical Pharmacology

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 695-705 (46 ref.)

**Keywords:** Encephalomyelitis, Autoimmune, Experimental; Multiple Sclerosis; Mice

**Abstract:** Neurodegeneration is the pathophysiological basis for permanent neurological disabilities in multiple sclerosis [MS]; thus neuroprotection is emerging as a therapeutic approach in MS research. Modulation of excitotoxicity by inhibition of NMDARs has been suggested for neuroprotection. but selective antagonisation of the NR2B subtype of these receptors, a subtype believed to play a more pivotal role in neurodegeneration, has not been

tested in MS. In this study inhibition of NR2B-containing NMDAR was evaluated on the animal model of MS, experimental autoimmune encephalomyelitis [EAE]. EAE induction was done using MOG in C57BL/6 mice. Therapeutic administration of different doses of highly selective NR2B-containing NMDAR inhibitor [RO25-6981] was compared with memantine [non-selective NMDAR antagonist] and vehicle. Neurological deficits in EAE animals were more efficiently decreased by selective inhibition of NR2B-containing NMDARs. Histological studies of the spinal cords also showed decreased inflammation, myelin degradation and neuro-axonal degeneration when RO25-6981 was administered with higher doses. The effects were dose dependent. Regarding the role of NR2B-containing NMDARs in excitotoxicity, selective inhibition of these receptor subtypes seems to modulate the neurological disabilities and pathological changes in EAE. Further elucidation of the exact mechanism of action as well as more experimental studies can suggest NR2B-containing NMDAR inhibition as a potentially effective treatment strategy for slowing down the clinical deterioration of disability in MS.

## Retinal Detachment

### Impact of duration of macula off rhegmatogenous retinal detachment on visual outcome.

Khanzada, Mahtab Alam; Wahab, Shahid; Hargun, Lakhani Das

[E-mail: dr.khanzada@yahoo.com](mailto:dr.khanzada@yahoo.com)

Dow University of Health Sciences - Civil Hospital

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 525-529 (30 ref.)

**Keywords:** Vision, Ocular; Scleral Buckling; Macula Lutea; Prospective Studies

**Abstract:** To assess impact of duration of macular detachment on visual outcome after scleral buckling for retinal detachment with macula off. Prospective, descriptive case series was conducted at Ophthalmology Department Dow University of Health Sciences, Civil Hospital Karachi and Al Noor Eye Clinic Karachi from May 2012 to June 2013. Five groups were made according to period of macular detachment. Best corrected Visual acuity [BCVA] was main outcome measure. P value < 0.001 was considered significant. Mean duration of macula off was 17.0 +/- 4.0 [SD] days. Mean pre-operative VA in patients with immediate, early, intermediate, delayed or late group were 2/60, 2/60, Counting figure [CF] 3 meters [m], CF2 m and Hand Movement [HM] respectively. Only 48.48% patients of those repaired within 7 to 15 days had significantly better [P < 0.001] BCVA [6/9-6/18] than the other groups. Only 19.35% patients of intermediate group achieved BCVA 6/18-6/24 [P < 0.001] which was comparatively better than the delayed and late group. Scleral buckle surgery for macular-off Rhegmatogenous Retinal Detachment has good postoperative visual outcomes if repaired within two weeks.

## surgery

### 23-gauge sutureless vitreo-retinal surgery for superior rhegmatogenous retinal detachment.

Zafar, Shakir; Mal, Washoo; Shakir, Munira; Kamil, Zeeshan; Bokhari, Syeda Aisha; Rizvi, Syed Fawad

[E-mail: drshakirzafar@yahoo.com](mailto:drshakirzafar@yahoo.com)

Free Base Eye Hospital - Department of Ophthalmology, LRBT

**JCPSP-Journal of the College of Physicians and Surgeons Pakistan** 2014; 24 (5): 327-330 (26 ref.)

**Keywords:** Vitreoretinal Surgery; Fluorocarbons; Non-Randomized Controlled Trials as Topic; Prospective Studies

**Abstract:** To determine the results of 23-gauge sutureless vitreo-retinal surgery for superior/supero-temporal rhegmatogenous retinal detachment [RRD]. Study Design: Quasi experimental study. LRBT, Free Base Eye Hospital, Karachi, from January 2010 to December 2011. Adult patients who underwent 23-gauge sutureless vitreo-retinal surgery along with use of Perfluoropropane [C<sub>3</sub>F<sub>8</sub>] gas as internal tamponading agent for fresh [upto 3 weeks] superior/supero-temporal RRD was reviewed. Major outcome measures were anatomical success, best corrected visual acuity [BCVA] with Log Mar and complications during and after surgery. Postoperative follow-up was done on 1st day and at 1st, 4th, 8th and finally at 12th week. Sixty eyes of 60 patients, age between 30 - 60 years including 37 [61.67%] males and 23 [38.33%] females having superior or superatemporal RRD underwent 23-gauge sutureless vitreo-retinal surgery with the use of perfluoropropane [C<sub>3</sub>F<sub>8</sub>] gas as internal tamponade at the end of procedure. Anatomical success rate was 81.66% [49 out of 60 eyes] with first surgery and raised to 90% [54 cases] with second surgery. Log Mar BCVA significantly improved from mean baseline 0.93 to 0.49 with mean difference of 0.43 [p < 0.001], 95% confidence interval. Postoperative complications were sub-conjunctival haemorrhage in 11 eyes [18.33%], wound leak in 7 eyes [11.66%], anterior chamber became shallow in 6 eyes [10%], cataract developed in 5 eyes [8.33%], re-retinal detachment in 4 eyes [6.66%], ocular hypotony and sterile inflammatory reaction in 3 eyes [5%] each, while iatrogenic breaks developed in 2 eyes [3.33%]. The 23-gauge sutureless vitreo-retinal surgery for superior rhegmatogenous retinal detachment achieved high anatomical success and significant visual improvement. Sub-conjunctival haemorrhage was the most frequent procedural complication.

## Sepsis

### blood

#### **Platelet counts, MPV and PDW in culture proven and probable neonatal sepsis and association of platelet counts with mortality rate.**

Ahmad, Mirza Sultan; Abdul Waheed

[E-mail:ahmadmirzasultan@gmail.com](mailto:ahmadmirzasultan@gmail.com)

Fazle Omar Hospital - Department of Paediatrics, NICU

**JCPSP-Journal of the College of Physicians and Surgeons Pakistan** 2014; 24 (5): 340-344 (24 ref.)

**Keywords:** Infant, Newborn, Diseases; Infant, Newborn; Platelet Count; Thrombocytopenia; Thrombocytosis; Mean Platelet Volume; Infant Mortality

**Abstract:** To determine frequency of thrombocytopenia and thrombocytosis, the MPV [mean platelet volume] and PDW [platelet distribution width] in patients with probable and culture proven neonatal sepsis and determine any association between platelet counts and mortality rate. Descriptive analytical study. NICU, Fazle Omar Hospital, from January 2011 to December 2012. Cases of culture proven and probable neonatal sepsis, admitted in Fazle Omar Hospital, Rabwah, were included in the study. Platelet counts, MPV and PDW of the cases were recorded. Mortality was documented. Frequencies of thrombocytopenia [ $< 150000/\text{mm}^3$ ] and thrombocytosis [ $> 450000/\text{mm}^3$ ] were ascertained. Mortality rates in different groups according to platelet counts were calculated and compared by chi-square test to check association. Four hundred and sixty nine patients were included; 68 [14.5%] of them died. One hundred and thirty six [29%] had culture proven sepsis, and 333 [71%] were categorized as probable sepsis. Thrombocytopenia was present in 116 [24.7%], and thrombocytosis was present in 36 [7.7%] cases. Median platelet count was  $213.0/\text{mm}^3$ . Twenty eight [27.7%] patients with thrombocytopenia, and 40 [12.1%] cases with normal or raised platelet counts died [ $p < 0.001$ ]. Median MPV was 9.30, and median PDW was 12.30. MPV and PDW of the patients who died and who were discharged were not significantly different from each other. Thrombocytopenia is a common complication of neonatal sepsis. Those with thrombocytopenia have higher mortality rate. No significant difference was present between PDW and MPV of the cases who survived and died.

## Sex Preselection

#### **Sex selection from Islamic point of view.**

Dezhkam, Lotfollah; Dezhkam, Hakime; Dezhkam, Iman

Jahrom University of Medical Sciences - Department of Maaref

**IJRM-Iranian Journal of Reproductive Medicine** 2014; 12 (4): 289-290 (12 ref.)

**Keywords:** Islam; Preimplantation Diagnosis

## Sexual Dysfunctions, Psychological

### epidemiology

#### **Frequency of sexual dysfunction and its causative factors among diabetic women in Turkey.**

Duman, Nuriye Buyukkayaci

[E-mail:nurfatih@hotmail.com](mailto:nurfatih@hotmail.com)

Hitit University School of Health Corum

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 558-563 (20 ref.)

**Keywords:** Diabetes Mellitus; Depression

**Abstract:** To determine the frequency of sexual dysfunction and its causative factors among the diabetic women. The sample of the research was made up of 200 diabetic women selected using simple-random sampling who went to endocrinology poly clinics for counseling and treatment. The data were gathered with Data Collection Form for Women's Descriptive Characteristics designed by the researchers using the information in literature, Female Sexual Function Index and Beck Depression Inventory. The data were assessed with percentages, arithmetic means, standard deviation and ANOVA test in computer environment. Out of two hundred diabetic patients nearly half of the participant women [48.0%] underwent depression and nearly one in four women experienced sexual dysfunction [26.2%]. In the analysis, there was statistically significant correlation between women's sexual dysfunction and diabetes type, diabetes complications, HbA1C value, having a sexual problem and presence of depression. This study showed that one in two diabetic women suffered from depression while nearly one in four diabetic women experienced sexual dysfunction.

## Slipped Capital Femoral Epiphyses

### diagnosis

#### **Case report: acute simultaneous bilateral slipped capital femoral epiphysis in an adult.**

Najjar, Husam Walid; Doar, Hazem Ibrahim

[E-mail: doc.najjar@yahoo.com](mailto:doc.najjar@yahoo.com)

King Faisal Specialist Hospital and Research Center - Surgery Department

**Jordan Medical Journal** 2013; 47 (4): 356-365 (10 ref.)

**Keywords:** Adult; Acute Disease; Renal Osteodystrophy; Hypertensive Encephalopathy

**Abstract:** The authors present a case of acute simultaneous bilateral slipped capital femoral epiphysis [SCFE] in a 17-year old male patient with renal osteodystrophy. This incident followed a convulsion that was a part of hypertensive encephalopathy. He was managed by closed reduction and percutaneous pinning. There are few reported cases of simultaneous bilateral SCFE in patients older than 16 years in English literature.

## Smoking

### epidemiology

#### **Prevalence of smoking and associated risk factors among medical professionals in hospitals of Karachi, Pakistan.**

Zafar, Mubashir

[E-mail: mubashirzafar900@gmail.com](mailto:mubashirzafar900@gmail.com)

Aga Khan University - Department of Community Health Sciences

**IJPM-International Journal of Preventive Medicine** 2014; 5 (4): 457-462 (22 ref.)

**Keywords:** Risk Factors; Prevalence; Health Personnel; Tobacco; Tertiary Care Centers; Cross-Sectional Studies

**Abstract:** Cigarette smoking is the largest preventable risk factor for morbidity and mortality in developed countries where at least one in four adults smoke cigarettes. Healthcare providers who smoke are less likely to advise patients to quit smoking. The aim of this study is to find out the frequency of tobacco smoking among medical professionals in tertiary care hospitals of Karachi, and to identify the common factors responsible for the continuation of smoking among healthcare providers. This descriptive cross-sectional study was carried out at public and private tertiary Care Hospitals/Institutes at Karachi. A self-administered questionnaire was used to collect data from 180 subjects. An informed consent was obtained from all the subjects. The data were analyzed using SPSS version 16.0. Prevalence of smoking was 29%. High prevalence of smoking was among male doctors as compared to female doctors. Sixty-eight per cent of smokers started smoking between 20 to 30 years of age. Age less than 35 years, male and public sectors hospitals were more likely OR 1.23, CI [0.98-2.41], 6.40 CI [4.48-10.52] and 2.61 CI [2.20-3.78] respectively. The Result of the study suggests that while healthcare smoking habits appear to be high, they are not uniformly low when compared from an international perspective. Health promotion programs focused on self-efficacy may be an effective tool for reducing the initiation, frequency, and amount of cigarette smoking among healthcare providers.

## Social Determinants of Health

#### **Political determinants of health: lessons for Pakistan.**

Jooma, Rashid; Sabatinelli, Guido

[E-mail: rashid.jooma@aku.edu](mailto:rashid.jooma@aku.edu)

Aga Khan University - Department of Surger

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 457-461 (28 ref.)

**Keywords:** Politics; Health Policy

**Abstract:** There is much concern about the capacity of the health system of Pakistan to meet its goals and obligations. Historically, the political thrust has been absent from the health policy formulation and this is reflected in the low and stagnant public allocations to health. Successive political leaderships have averred from considering healthcare is a common good rather than a market commodity and health has not been recognized as a constitutional right. Over 120 of world's nation states have accepted health as a constitutional right but the 1973 Constitution of Pakistan does not mandate health or education as a fundamental right and the recently adopted 18th constitutional amendment missed the opportunity to extend access to primary health care as an obligation of the State. It is argued in this communication that missing from the calculations of policy formulation and agenda setting is the political benefits of providing health and other social services to underserved populations. Across the developing world, many examples are presented of governments undertaking progressive health reforms that bring services where none existed and subsequently reaping electoral benefit. The political determinant of healthcare will be realized when the political leaders of poorly performing countries can be convinced that embracing distributive policies and successfully bringing healthcare to the poor can be major factors in their re-elections.



## Solid Waste

### **Aerobic composting of solid waste Aurangabad from aurangabad city [MS], India.**

Late, A.M.; Mule, M. B.

[E-mail:amolmlate@gmail.com](mailto:amolmlate@gmail.com)

Dr. B.A.M. University - Command Area Development Authority - Department of Environmental Science

**International Journal of Environmental Research** 2014; 8 (2): 285-288 (11 ref.)

**Keywords:** Biodegradation, Environmental

**Abstract:** The exponential growth of urbanization leads to increase in severity of environmental problems especially associated with disposal of solid waste. With considering the increasing rate of solid waste generation in urban area, the problem of availability of space required to dispose it off is become a concern for planners and administrators of urban local bodies [ULB]. In order to cope up with the urge of availability of dumping space to adopt the aerobic composting technique for the degradable fraction of solid waste is become unavoidable. The present paper is an attempt to study the feasibility of aerobic composting technique by using metallic container for waste generated from Aurangabad city of Maharashtra state. The study was carried out for a period of one year with monitoring of selected parameters. The results reveals that for conversion of waste into compost of better quality requires 40-45 days. Whereas the NPK value of prepared compost resemble with international standards.

## Somites

### **An in vitro study on chick somite ability to express cerberus, chordin, FGF8, follistatin, and noggin transcripts.**

Farahabadi, Samaneh Sadat Hosseini; Karbalaie, Khadijeh; Salehi, Hossein; Rabiee, Farzaneh; Ghaedi, Kamran; Nasr Esfahani, Mohammad Hossein

University of Isfahan - School of Sciences - Cell and Molecular Biology Division, Department of Biology

**AJMB-Avicenna Journal of Medical Biotechnology** 2014; 6 (2): 119-122 (15 ref.)

**Keywords:** Chick Embryo; Glycoproteins; Intercellular Signaling Peptides and Proteins; Fibroblast Growth Factor 8; Follistatin; Carrier Proteins; Cytokines

**Abstract:** In vitro simulation of developmental processes is an invaluable tool to shed light on the intrinsic mechanism of developmental biosystems such as central nervous system in mammals. Chick somites have been used to simulate the neural differentiation of human neural progenitor cells. In the present study, we aimed to indicate whether somites have the ability to express required neural differentiation factors at mRNA level. Chick embryos were isolated from the yolk surface of the fertilized eggs and somites were subsequently isolated from embryos under a dissecting microscope. Total RNA of the somites was extracted and RT-PCR carried out with specific primers of cerberus, chordin, FGF8, follistatin and noggin. Data showed that five aforementioned factors were co-expressed after 7 days in vitro by somites. We concluded that neural induction property of somites appeared by production of required neural differentiation factors including cerberus, chordin, FGF8, follistatin and noggin.

## Sophora

### **In-vitro evaluation of cytotoxic and apoptogenic properties of Sophora pachycarpa.**

Mousavi, Seyed Hadi; Motaiez, Mahsa; Zamiri Akhlaghi, Amir; Emami, Seyed Ahmad; Tayarani Najaran, Zahra

Mashhad University of Medical Sciences - Medical Toxicology Research Centre

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 665-673 (48 ref.)

**Keywords:** Apoptosis; Cytotoxins; Fabaceae; Methanol; Plant Extracts; Plant Roots; Cell Line, Tumor

**Abstract:** *Sophora pachycarpa* Schrenk ex C.A.Mey. belongs to the family Fabaceae. Some species of the genus *Sophora* have shown to possess anti-proliferative and apoptosis-inducing activities in cancer cells. However, there is no available information addressing this effect in *S. pachycarpa*. Here, we investigated the cytotoxic effects of methanol extract and different fractions obtained from *S. pachycarpa* root on different cancer cell lines including A549, HeLa, HL-60, MCF-7, and PC3 cell lines and leukocytes as non-malignant cells. Apoptotic cells were determined using PI staining of DNA fragmentation by flow cytometry [sub-G1 peak]. *S. pachycarpa* inhibited the growth of malignant cells in a dose-dependent manner. CH<sub>2</sub>Cl<sub>2</sub> and EtOAc fractions showed the lowest IC<sub>50</sub> values ranging from 6 to 50 microg/mL in various cancer cell lines. HeLa cells as the most sensitive cells were chosen for further mechanistic studies. The sub-G1 peak in flow cytometry histogram of *S. pachycarpa* treated HeLa cells indicates apoptotic cell death in *S. pachycarpa*-induced toxicity. In conclusion, *S. pachycarpa* exerts cytotoxic effects in different cancer cell lines in which apoptosis plays an important role. Thus, *S. pachycarpa* could be considered as a potential chemotherapeutic agent in cancer treatment.

## Spermatogonia

### Enrichment of undifferentiated type a spermatogonia from goat testis using discontinuous percoll density gradient and differential plating.

Heidari, Banafsheh; Gifani, Minoo; Shirazi, Abolfazl; Zarnani, Amir Hassan; Baradaran, Behzad; Naderi, Mohammad Mehdi; Behzadi, Bahareh; Borjian Boroujeni, Sara; Sarvari, Ali; Lakpour, Niknam; Akhondi, Mohammad Mehdi  
Avicenna Research Institute [ACECR] - Reproductive Biotechnology Research Center

**AJMB-Avicenna Journal of Medical Biotechnology** 2014; 6 (2): 94-103 (40 ref.)

**Keywords:** Goats; Testis; Povidone; Silicon Dioxide; Ubiquitin Thiolesterase

**Abstract:** The well documented source for adult multipotent stem cells is Spermatogonial Stem Cells [SSCs]. They are the foundation of spermatogenesis in the testis throughout adult life by balancing self-renewal and differentiation. The aim of this study was to assess the effect of percoll density gradient and differential plating on enrichment of undifferentiated type A spermatogonia in dissociated cellular suspension of goat testes. Additionally, we evaluated the separated fractions of the gradients in percoll and samples in differential plating at different times for cell number, viability and purification rate of goat SSCs in culture. Testicular cells were successfully isolated from one month old goat testis using two-step enzymatic digestion and followed by two purification protocols, differential plating with different times of culture [3, 4, 5, and 6 hr] and discontinuous percoll density with different gradients [20, 28, 30, and 32%]. The difference of percentage of undifferentiated SSCs [PGP9.5 positive] in each method was compared using ANOVA and comparison between the highest percentage of corresponding value between two methods was carried out by t-test using Sigma Stat [ver. 3.5]. The highest PGP9.5 [94.6 +/- 0.4] and the lowest c-Kit positive [25.1 +/- 0.7] in Percoll method was significantly [ $p \leq 0.001$ ] achieved in 32% percoll gradient. While the corresponding rates in differential plating method for the highest PGP9.5 positive cells [81.3 +/- 1.1] and lowest c-Kit [17.1 +/- 1.4] was achieved after 5 hr culturing [ $p < 0.001$ ]. The enrichment of undifferentiated type A spermatogonia using Percoll was more efficient than differential plating method [ $p < 0.001$ ]. Percoll density gradient and differential plating were efficient and fast methods for enrichment of type A spermatogonial stem cells from goat testes.

## Spermatozoa

### Morphological diversity of sperm: a mini review.

Prakash, Seppan; Prithiviraj, Elumalai; Suresh, Sekar; Lakshmi, Nagella Venkata; Ganesh, Mohanraj Karthik; Anuradha, Murugesan; Ganesh, Lakshmanan; Dinesh, Premavathy

[E-mail: seppanprakash@yahoo.com](mailto:seppanprakash@yahoo.com)

University of Madras, Taramani Campus - Dr. Arcot Lakshmanasamy Mudaliar Postgraduate Institute of Basic Medical Sciences - Department of Anatomy

**IJRM-Iranian Journal of Reproductive Medicine** 2014; 12 (4): 239-242 (36 ref.)

**Keywords:** Sperm Count; Testis

**Abstract:** Sperms are highly specialized cells for delivering DNA from male to the ovum. Incredibly, wide degree of diversity in sperm morphology in their basic structures i.e. head, middle piece and tail is found across species. Differences in terms of overall size of the sperm, shape and number of sperm produced are also incredible. One of the key for this variations or diversity in sperm may be associated with female reproductive tract, sperm competition, testicular size and sperm size and number. Establishing a correlation between sperm morphology and factors influencing them is a phenomenal task. In this mini-review these associations and the anatomical and functional adaptations among different from of sperm cells that have evolved to optimize fertilization success are discussed. Nevertheless, explaining these morphological diversities in sperm cells is a challenging question and it seems that evolutionary biologists have only recently engaged in exploring its links and patterns. From the literatures it seems that there is no causal relationship between sperm size and testicular size, however, the accumulated knowledge do indicates evolution of sperm morphology across species has some associations with female reproductive tract, sperm competition and sperm size and number, however interpreting these results for phylogentic correlations should be approached with caution.

## Splenectomy

### Laparoscopic splenectomy.

Javed, Irfan; Malik, Awais Amjad; Khan, Ahsan; Allahnawaz; Shamim, Romaisa; Ayyaz, Mahmood

[E-mail: awaisamjad@gmail.com](mailto:awaisamjad@gmail.com)

Services Institute of Medical Sciences - Services Hospital - Department of Surgery

**JCPSP-Journal of the College of Physicians and Surgeons Pakistan** 2014; 24 (5): 361-364 (14 ref.)

**Keywords:** Laparoscopy; Spleen

**Abstract:** Patients undergoing laparoscopic splenectomy were observed for their postoperative recovery and development of complications. It was a retrospective analysis done at Services Hospital and National Hospital and Medical Center, Lahore, from January 2010 to December 2012. A total of 13 patients underwent laparoscopic splenectomy and were included in the study. Patients were followed for their postoperative recovery and development

of any complications. The median age of patients was 19 years ranging from 13 to 69 years. Accessory spleens were removed in 3 patients. Mean operating time was 158 minutes. One operation had to be converted to open because of uncontrolled hemorrhage. Six patients experienced postoperative complications including unexplained hyperpyrexia [n=2], pleural effusion [n=4] and prolonged pain > 48 hours [n=1]. No deaths or infections were seen. Seven out of 8 patients with idiopathic thrombocytopenic purpura developed a positive immediate response to the splenectomy, defined as a platelet count greater than  $100 \times 10^9/L$  after the surgery, which was maintained without medical therapy. Mean hospital stay was 5.5 days. Average time to return to activity was 15 days. All patients were followed for 6 months and no follow-up complications were noted.

## Still's Disease, Adult-Onset

### **Simultaneous presentation of disseminated intravascular coagulation and hemophagocytic syndrome in a patient with adult-onset Still's disease.**

Yan, Kaili; Chen, Tianping; Wdng, Huiping; Tao, Qianshan; Li, Yinwei; Wang, Chunhui; Xiong, Shudao; Zhai, Zhimin  
Second Affiliated Hospital of Anhui Medical University - Department of Hematology

**JCPSP-Journal of the College of Physicians and Surgeons Pakistan** 2014; 24 (5): 379-380 (6 ref.)

**Keywords:** Disseminated Intravascular Coagulation; Lymphohistiocytosis, Hemophagocytic

## Stroke

### drug therapy

### **Study of the neuroprotective effects of memantine in patients with mild to moderate ischemic stroke.**

Kafi, Hamidreza; Salamzadeh, Jamshid; Beladimoghadam, Nahid; Sistanizad, Mohammad; Kouček, Mehran  
Shahid Beheshti University of Medical Sciences - Faculty of Pharmacy - Department of Clinical Pharmacy

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 591-598 (30 ref.)

**Keywords:** Brain Ischemia; Memantine-pharmacology; Neuroprotective Agents; Prospective Studies

**Abstract:** Ischemic stroke is amongst the top four causes of mortality and the leading cause of disability in the world. The aim of this study was to evaluate the efficacy of a high dose memantine on neurological function of patients with ischemic stroke. In a randomized, 2 armed, open-label study, patients with mild to moderate cerebral thromboembolic event [CTEE] who admitted to Imam Hossein Hospital, Tehran, Iran, during preceding 24 hours, entered the study. Patients allocated in two study groups of memantine [as add-on therapy] and control. All patients were managed based on the American Heart Association and American Stroke Association [AHA/ASA] guidelines. Patients in memantine group received conventional treatment plus memantine 20 mg TID. The National Institute of Health Stroke Scale [NIHSS] was determined and recorded daily. The primary objective was comparison of the changes in NIHSS in the study groups at day 1 and day 5 of intervention. Significance level of  $p < 0.05$  was considered for statistical analysis. Patients were randomly allocated in control [15 women and 14 men, age 70.78 +/- 10.92 years] and memantine [16 women and 8 men, age 73.33 +/- 9.35 years] groups. There were no significant differences in age and sex distribution of two study groups as well as in comorbidities and concurrent drugs. NIHSS changes were significantly different between control [1.24 +/- 0.96] and memantine group [2.96 +/- 0.1], [ $p < 0.0001$ ]. Our results reveal that memantine added to standard treatment of CTEE could result in a remarkable decrease in the NIHSS confirming improvement of the neurological function of the patients.

### mortality

### **Can we use serum gamma-glutamyl transferase levels to predict early mortality in stroke?**

Akinci, Emine; Dogan, Nurettin Ozgur; Gumus, Haluk; Akilli, Nazire belgin

[E-mail:emineakinci@yahoo.com](mailto:emineakinci@yahoo.com)

Kecioren Training and Research Hospital - Emergency Department

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 606-610 (25 ref.)

**Keywords:** gamma-Glutamyltransferase-blood; Mortality; Retrospective Studies

**Abstract:** Serum gamma-glutamyl transferase [GGT] is a marker for alcohol consumption and hepatobiliary diseases. There are reports on the prognostic role of GGT in coronary artery diseases and stroke. The aim of our study was to identify the potential differences in GGT levels in different types of stroke, and to evaluate the correlation between GGT and 30-day mortality. Patients diagnosed with stroke in emergency department between 01.01.2010 and 30.12.2012 was included in the study. Imaging techniques were used to distinguish between hemorrhagic and ischemic stroke. Ischemic strokes were further classified as either atherosclerotic/lacunar or embolic. Parameters including age, gender, vital signs [systolic and diastolic blood pressure], comorbid diseases [HT, DM, CAD, smoking and alcohol consumption], used medications, previous history of stroke, NIHSS score at the time of admission to emergency department, laboratory parameters [glucose, white blood cell count, hemoglobin, platelet, total cholesterol,

creatinine] and duration of hospitalization were recorded. Death records were obtained from patients' medical records. One thousand eighty six patients were included in the study. GGT levels were not significantly different between ischemic and hemorrhagic strokes [ $p=0.435$ ]. On the other hand, GGT levels in embolic strokes were significantly higher compared to atherosclerotic/lacunar, strokes [ $p=0.001$ ]. GGT levels [median 24.50 [16.00-43.00]] in Intensive Care Unit patients were significantly higher compared to GGT level [22.00 [15.00-34.25]] in admitted to service beds patients [ $p=0.015$ ]. Median GGT level of deceased patients was 24.00 [16.00-41.25] and median GGT level of alive patients was 22.00 [15.00-35.00]. GGT level of deceased patients was significantly higher compared to GGT levels of alive patients [ $p=0.048$ ]. There was no difference in GGT levels between ischemic and hemorrhagic strokes; however, GGT levels in embolic strokes were significantly higher compared to atherosclerotic/lacunar strokes. High GGT levels are correlated with early mortality in stroke. We believe that GGT may be used as a predictor of mortality in future studies.

## Students, Medical

### Searching the way to keep students awake in class room.

Badar, Sumera; Musarrat Ul-Hasnain; Hashmi, Zahid Yaseen  
Punjab Medical College - Department of Medical Education

**Biomedica** 2014; 30 (1): 62-68 (16 ref.)

**Keywords:** Learning; Perception; Questionnaires

**Abstract:** Team Based Learning [TBL] is gaining popularity as a small group teaching methodology in Medical institutions. Owing to its property of being less resource intensive it is especially useful in developing countries. Students being most important stakeholders need to be focused on research for implementation of the study was conducted to access the students' perceptions as they compare traditional lectures with new methodology in our context. A fifteen item five point Likert's scale questionnaire duly prepared by experts and piloted in students, was distributed among students of fourth year at the end of second module of Team based learning in the subject of internal medicine for fourth year MBBS class and collected after completion. Data was analyzed using SPSS 15. Independent t-test was performed and means were compared for TBL and Lecture methodology. Global rating was also compared for both. Total 174 students responded out of which 53 were males and 121 females. 61 students marked "excellent" category in overall rating with preference to TBL by 51 and lectures by 10. Among 121 marking in [good] category 81 were for TBL and 40 for lectures. All fifteen responses in the questionnaires favoured TBL. Comments included [excellent way of retention] for TBL. There was active participation of students throughout the sessions. Students favoured TBL as compared to lectures and therefore TBL is a suitable preferred methodology to incorporate active learning in our undergraduate curriculum.

## Sturge-Weber Syndrome

### Sturge-Weber syndrome without facial nevus.

Ganesh, Anuradha; Al Mujaini, Abdullah

[E-mail:mujainisqu@hotmail.com](mailto:mujainisqu@hotmail.com)

Sultan Qaboos University Hospital - Department of Ophthalmology

**SQUMJ-Sultan Qaboos University Medical Journal** 2014; 14 (2): 141-142 (14 ref.)

**Keywords:** Nevus; Skin Neoplasms; Face

### Three-year-old girl with Sturge-Weber syndrome without facial nevus.

Koul, Roshan; Mani, Renjith; Hamid, Rana S.

[E-mail:koul@squ.edu.om](mailto:koul@squ.edu.om)

Sultan Qaboos University Hospital - Departments of Medicine

**SQUMJ-Sultan Qaboos University Medical Journal** 2014; 14 (2): 243-244 (3 ref.)

**Keywords:** Nevus; Skin Neoplasms; Face; Magnetic Resonance Imaging; Tomography, X-Ray Computed

## Sulfur

### A new method for sulfur components removal from sour gas through application of zinc and iron oxides nanoparticles.

Sekhvatjou, M.S.; Moradi, R.; Alhashemi, A. Hosseini; Hejabi, A. Taghinia

[E-mail:sekhvatjou@gmail.com](mailto:sekhvatjou@gmail.com)

Islamic Azad University - Khuzestan Science and Research Branch - Department of Environmental Engineering

**International Journal of Environmental Research** 2014; 8 (2): 273-278 (29 ref.)

**Keywords:** Natural Gas; Zinc Oxide; Ferric Compounds; Nanoparticles; X-Ray Diffraction; Microscopy, Electron, Transmission

**Abstract:** Use of zinc and iron oxide are common in the desulfurization process from natural gas. In this research, after determinations of the size and specifications through TEM and XRD for each of the metal oxides, two different size ratios were used, 0.66 for zinc oxide and 0.142 for iron oxide. Further, absorption of sulfur compounds in gas [hydrogen sulfide [H<sub>2</sub>S], carbonyl sulfide [COS], methyl mercaptan [C<sub>1</sub>H], ethyl mercaptan [C<sub>2</sub>SH], dimethyl sulfide [DMS], and carbon disulfide [CS<sub>2</sub>]] were evaluated at 26°C, 15 psi. The separation and identification processes of the sulfur components were measured by gas chromatography with a chemical luminescence sulfur detector. Results show that particle size variation in zinc oxide increased the sulfur removal from H<sub>2</sub>, C<sub>1</sub>SH and C<sub>2</sub>SH from 9.4% to 15.8%, but in the case of COS, DMS and CS, no significant sulfur removal was observed. Further, with reduction of iron oxide particle size [from 0.140 µm to 20 nm], the sulfur removal rate increased from 37.9 to 63.1% in all of the natural gas components.

## Tamoxifen

### pharmacology

#### The effects of tamoxifen in combination with tranilast on CXCL12-CXCR4 axis and invasion in breast cancer cell Lines.

Darakhshan, Sara; Bidmeshkipour, Ali; Mansouri, Kamran; Saeid, Hakhamaneshi Mohammad; Ghanbari, Ali  
Razl University - Faculty of Science - Department of Biology

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 683-693 (42 ref.)

**Keywords:** ortho-Aminobenzoates; Chemokine CXCL12; Receptors, CXCR4; Breast Neoplasms; Cell Line, Tumor; Neoplasm Metastasis

**Abstract:** It has been reported that CXCL12 binding to CXCR4 induces several intracellular signaling pathways, and enhances survival, proliferation, and migration of malignant cells. In the present study, we examined the effects of anti-estrogen tamoxifen and anti-allergic tranilast drugs as a single or in combination on invasion by two in-vitro invasion assays. wound-healing and matrigel invasion on MCF-7 and MDA-MB-231 human breast cancer cell lines. The mRNA expression levels of CXCR4 and CXCL 12 were measured by quantitative real time-RT PCR and CXCL 12 protein levels were evaluated by ELISA assay. The data showed that treatment with tamoxifen and tranilast as a single or in combination resulted in decreased CXCR4 and CXCL 12 mRNA and CXCL 12 protein expression levels. Both in-vitro invasion assays markedly showed synergistic effect of tamoxifen when combined with tranilast drug. Either ER-positive or ER-negative breast cancer cells were sensitive to this combination therapy. In conclusion, Tranilast increases antimetastatic effect of tamoxifen. The synergistic effect of tranilast is not estrogen dependent; however tamoxifen may sensitize the cells for the action of tranilast. The data also support the importance of the CXCR4/CXCL12 interaction in breast cancer metastasis, and further suggest that CXCR4 and CXCL 12 are critical targets for tamoxifen and tranilast in combination or alone.

## Tannins

#### Sorption of tannin from aqueous solutions on organo-modified smectite-illite.

Hamdi, N.; Hamdaoui, S.; Srasra, E.

*E-mail: hamdinouredine@yahoo.com.fr*

**International Journal of Environmental Research** 2014; 8 (2): 367-376 (26 ref.)

**Keywords:** Aluminum Silicates; Quaternary Ammonium Compounds; Adsorption; Silicates; Minerals

**Abstract:** An organophilic clay-based adsorbent was prepared by incorporating a cationic surfactant, hexadecyltrimethylammonium [HDTMA] at different levels of CEC in Tunisian smectite-illite clay. The presence of the HDTMA surfactant enhanced the adsorption ability of the clays toward polyphenolic compounds from aqueous systems. Adsorption experiments were carried out using a batch equilibration technique to investigate the removal of tannin by the surfactant modified clay. Adsorbent characterizations were investigated using X-ray diffraction, infrared spectroscopy, surface area analysis, and potentiometric titration. The effects of pH, contact time and initial solute concentration on the adsorption of tannin onto modified clay were investigated. The adsorption process was much dependent on the pH and was found to follow pseudo-second-order kinetics. The optimum pH value was at pH ranging from 4.5 to 6. The maximum removal efficiency of tannin from aqueous solution was 91%. The adsorption isotherms were measured and correlated to Langmuir isotherms. From the results it can be concluded that the surfactant-modified clay could be a good adsorbent for treating tannin-contaminated waters.

## Theophylline

### analysis

#### **Simple, fast and reliable liquid chromatographic and spectrophotometric methods for the determination of theophylline in urine, saliva and plasma samples.**

Charehsaz, Mohammad; Gurbay, Aylin; Aydir, Ahmet; Sahin, Gonul  
Yeditepe University - Faculty of Pharmacy - Department of Toxicology

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 431-439 (30 ref.)

**Keywords:** Theophylline-blood; Theophylline-urine; Saliva; Plasma; Urine; Chromatography, High Pressure Liquid; Spectrophotometry, Ultraviolet

**Abstract:** In this study, a high-performance liquid chromatographic method [HPLC] and UV Spectrophotometric method were developed, validated and applied for the determination of theophylline in biological fluids. Liquid- liquid extraction is performed for isolation of the drug and elimination of plasma and saliva interferences. Urine samples were applied without any extraction. The chromatographic separation was achieved on a CIS column by using 60:40 methanol:water as mobile phase under isocratic conditions at a flow rate of 0.75 mL/min with UV detection at 280 nm in HPLC method. UV Spectrophotometric analysis was performed at 275 nm. The results of HPLC analysis were as follows: the limit of quantification: 1.1 microg/mL for urine, 1.9 microg/mL for saliva, 3.1 microg/mL for plasma; recovery: 94.85% for plasma, 100.45% for saliva, 101.39% for urine; intra-day precision: 0.22-2.33%, inter-day precision: 3.17-13.12%. Spectrophotometric analysis results were as follows: the limit of quantisation: 5.23 microg/mL for plasma, 8.7 microg/mL for urine; recovery: 98.27% for plasma, 95.25% for urine; intra-day precision: 2.37-3.00%, inter-day precision: 5.43-7.91%. It can be concluded that this validated HPLC method is easy, precise, accurate, sensitive and selective for determination of theophylline in biological samples. Also Spectrophotometric analysis can be used where it can be applicable.

## Thiadiazoles

### chemical synthesis

#### **N-[5-mercapto-1,3,4-thiadiazol-2-yl]-2-phenylacetamide derivatives: synthesis and in-vitro cytotoxicity evaluation as potential anticancer agents.**

Mohammadi Farani, Ahmad; Heidarian, Neda; Aliabadi, Alireza

Kermanshah University of Medical Sciences - Faculty of Pharmacy - Department of Pharmacology, Toxicology and Medical Services

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 487-492 (27 ref.)

**Keywords:** Benzeneacetamides; Antineoplastic Agents; Neuroblastoma; Colonic Neoplasms; Prostatic Neoplasms

**Abstract:** A new series of A-[5-Mercapto-1.3.4-thiadiazol-2-yl]-2-phenylacetamide derivatives [3a-3j] were synthesized via an amidation reaction using EDC and HOBt in acetonitrile solvent at room temperature condition. Chemical structures were characterized by <sup>1</sup>H NMR, IR and MS spectroscopic methods and related melting points were also determined. The anticancer activity was evaluated using MTT procedure in-vitro. All compounds were tested against SKNMC [Neuroblastoma], HT-29 [Colon cancer] and PC3 [Prostate cancer] cell lines. According to the toxicological data, none of the synthesized derivatives exerted superior activity than doxorubicin as reference drug. Derivatives with Ortho chlorine [compound 3d], meta methoxy [compound 3h] and meta fluorine [compound 3b] substituents on the phenyl ring exhibited the best cytotoxic activity against SKNMC [IC<sub>50</sub> = 4.5 +/- 0.035 microM], HT-29 [IC<sub>50</sub> = 3.1 +/- 0.030 microM] and PC3 [IC<sub>50</sub> = 12.6 +/- 0.302 microM] cell lines respectively.

## Thiazoles

### chemical synthesis

#### **Synthesis and anticonvulsant evaluation of some new 6-[substituted-phenyl] thiazolo[3,2-b][1,2,4]triazole derivatives in mice.**

Deng, Xian Qing; Song, Ming Xia; Gong, Guo Hua; Wang, Shi Ben; Quan, Zhe Shan

Jinggangshan University - Medical College

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 459-469 (36 ref.)

**Keywords:** Triazoles; Anticonvulsants; Mice; Electroshock; Pentylene tetrazole

**Abstract:** Epilepsy is the most frequent neurological affliction and afflicts 1% about of the worlds population. Currently there is an urgent need for the development of novel anticonvulsants with higher levels of potency and lower levels of toxicity. In this paper, a series of new 6-[substituted-phenyl] thiazolo[3,2-b][1.2.4]triazole derivatives were synthesized

and tested for their anticonvulsant activities using the maximal electroshock [MES] and subcutaneous pentylenetetrazole [PTZ] screens, which are the most widely employed seizure models for early identification of candidate anticonvulsants. Their neurotoxicity was determined applying the rotarod test. In these compounds, 6-[4-fluorophenyl]thiazolo[3,2-b][1,2,4]triazole [3c] showed selective protection against the MES seizures with an ED[50] value of 49.1 mg/Kg and a TD[50] value of 94.1 mg/Kg, which provided compound 3c a protective index [PI = TD[50]/ED[50] of 1.9 in the MES test. 6-[4-Propoxyphenyl]thiazolo[3,2-b][1,2,4]triazole [5b] was found to be active in both models, i. e. MES test and PTZ test. In the PTZ screen, compound 5b gave an ED[50] of 63.4 mg/Kg and a TD[50] of 105.6 mg/Kg, resulting in a PI value of 1.7 which is higher than carbamazepine.

## Thrombasthenia

### diagnosis

#### **Glanzmann thrombasthenia associated with human immunodeficiency virus-positive patient.**

Manne, Rakesh Kumar; Natarajan, Kannan; Patil, Rajendra; Prathi, Venkata Sarath; Beeraka, Swapna Sridevi; Kolaparathi, Venkata Suneel Kumar

*E-mail: [mannae@rediffmail.com](mailto:mannae@rediffmail.com)*

Narayana Dental College and Hospital - Department of Oral Medicine and Radiology

**IJPM-International Journal of Preventive Medicine** 2014; 5 (4): 500-504 (10 ref.)

**Keywords:** HIV; HIV Infections; Gingival Hyperplasia; Thrombocytopenia; Platelet Glycoprotein GPIIb-IIIa Complex

**Abstract:** Glanzmann's thrombasthenia [GT] is an autosomal recessive inherited platelet function defect characterized by normal platelet count, prolonged bleeding time and abnormal clot retraction. This disease typically presents in infancy or early childhood and has proven to have very good prognosis. In this case study, a 22-year-old GT patient who also developed human immunodeficiency virus [HIV] infection after sometime is reported. The patient showed oral manifestations of gingival hyperplasia and petechial lesions. Unfortunately the detection of both thrombasthenia and HIV were done at considerably late stages which contributed to a poor prognosis. The patient died of cardiopulmonary arrest secondary to HIV, thrombasthenia and thrombocytopenia. The importance of early detection, supportive care and communication between the general and oral physician in management of the GT is also discussed.

## Thumb

### abnormalities

#### **Study of non syndromic thumb aplasia in six independent cases.**

Riaz, Hafiza Fizzah; Lal, Karmoon; Ahmad, Bashir; Shuaib, Muhammad; Naqvi, Syeda Farwa; Malik, Sajid

Quaid-i-Azam University - Faculty of Biological Sciences - Human Genetics Program

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 677-681 (13 ref.)

**Keywords:** Fingers-abnormalities; Limb Deformities, Congenital; Phenotype

**Abstract:** To report on six independent and isolated cases demonstrating thumb aplasia as an essentially limb-specific phenotype. The subjects were ascertained during Z01 1 -201 3 from six different geographic regions of Pakistan, and underwent detailed clinical and phenotypic examination. The affected arms of patients had complete absence of first digital rays, medial inclinations of second and fifth fingers, narrowing of palms, missing carpals, and shortening of zeugopod. All the subjects were presented with isolated and sporadic limb deficiencies, and five had no family history of limb or any other malformation. Parental consanguinity was denied in majority of the cases. We present detailed phenotypic manifestation of thumb apalsia in these subjects. Thumb aplasia markedly impairs the normal function of affected hand. Surgical procedures like pollicisation of the index finger should be employed to improve the quality of life of these subjects. There is so far no specific genetic factor known for isolated thumb aplasia, compromising an accurate genetic counseling. Collection of patients with similar phenotypic presentations could be useful in further molecular genetic investigations.

## Timolol

### adverse effects

#### **Does long-term administration of a beta-blocker (timolol) induce fibril-based cataract formation in-vivo?**

Nikbakht, Mohammad Reza; Ashrafi Kooshk, Mohammad Reza; Jaafari, Morteza; Ghasemi, Moosa; Khodarahmi, Reza

Kermanshah University of Medical Sciences - Faculty of Pharmacy

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 599-611 (26 ref.)

**Keywords:** Adrenergic beta-Antagonists; Amyloid; Cataract-chemically induced; Crystallins

**Abstract:** Timolol is a non-selective beta-adrenergic receptor antagonist administered for treating glaucoma, heart attacks and hypertension. In the present study, we set out to determine whether or not timolol can provoke cataract formation, thus the influence of timolol on the amyloid-type aggregation of crystallin was investigated. We then provided experimental evidence of crystallin aggregation and its induction by timolol using different spectroscopic measurements. Turbidimetric measurements as well as ThT fluorescence data indicated that timolol induce extent of crystallin amyloid formation. The kinetic of protein aggregation was also changed in presence of increasing concentrations of the drug suggesting that long-term drug administration may contribute to the development of cataract. Since the consequence of timolol-crystallin interaction has yet to be identified, additional data on it may help us to postpone amyloid cataract formation.

## Trace Elements

#### **Determination of trace elements concentration in wet and dry atmospheric deposition and surface soil in the largest industrial city, southwest of Iran.**

Moaref, S.; Sekhavatjou, M.S.; Alhashemi, A. Hosseini

Islamic Azad University - Science and Research Branch - Department of Environmental Engineering

**International Journal of Environmental Research** 2014; 8 (2): 335-346 (71 ref.)

**Keywords:** Atmosphere; Soil; Industry; Cities; Cadmium; Chromium; Lead; Zinc

**Abstract:** Dry and wet atmospheric depositions as well as urban surface soil samples were collected in eight different land use zones [during 2010] of the most important and largest industrial city, southwest Iran for determining Cadmium, Chromium, Lead and Zinc. The average of Cd, Cr, Pb and Zn concentrations in the study area for wet precipitation were 17.8 microg/L, 49.97 microg /L, 2.31 microg/L, and 0.53 microg/L, respectively. Also, the mean levels of mentioned elements were 0.144 mg/nr.day, 0.457 mg/m.day, 0.091 mg/nr.day, and 0.0017 mg/ nr.day, respectively in dry deposition samples. Moreover, the average amounts of Pb, Zn, Cr, and Cd were recorded for soil samples as a value of 64.2 mg/kg, 197.3 mg/kg, 61.24 mg/kg and 0.73 mg/kg. As a result, the trend of metal concentrations in all media were similar and decreased as Zn> Pb> Cr> Cd. The high contamination levels of heavy metals indicate that they have been significantly impacted from anthropogenic activities [non-ferrous metal smelting, fossil fuel combustion, pit burning, gas flaring and traffic sources]. According to analysis results, the significantly positively correlations between Cd-Pb, Pb-Zn and Zn-Cd were shown in all three environments.

## Tubulin

#### **An in silico based comparison of drug interactions in wild and mutant human beta-tubulin through docking studies.**

Chellasamy, Selvaakumar; Mohammed, Sudheer M.M.

[E-mail:selvaakumar@gmail.com](mailto:selvaakumar@gmail.com)

Padmashree Dr.D.Y. Patil University - Department of Biotechnology and Bioinformatics

**AJMB-Avicenna Journal of Medical Biotechnology** 2014; 6 (2): 81-93 (80 ref.)

**Keywords:** Computer Simulation; Drug Interactions; Mutant Proteins; Paclitaxel; Epothilones

**Abstract:** Tubulin protein being the fundamental unit of microtubules is actively involved in cell division thus making them a potential anti-cancer drug target. In spite of many reported drugs against tubulin, few of them have started developing resistance in human beta-tubulin due to amino acid substitutions. In this study we generated three mutants [F270V, A364T and Q292E] using Modeller9v10 which were targeted with compounds from higher and lower plants along with marine isolates using iGEMDOCK2.0 to identify their residual interactions. The mutant F270V does not bring in any increase in the binding affinity in comparison with the taxol-wild type due to their conservative substitutions. However, it increases the volume of the active site. A364T mutant brings a better binding among few of the marine and higher plants isolates due to the substitution of the non-reactive methyl group with the polar residue. But this leads to reduced active site volume. Finally the mutant Q292E from epothilone binding site brings a remarkable change in drug binding in the mutants in comparison with the wild type due to the substitution of uncharged residue with the charged one. But as such there was no change in the volume of the active site observed in them. Lower plants extracts were



reported to exhibit better interactions with the taxol and epothilone binding sites. Whereas marine and higher plants isolates shows significant interactions only in the wild type instead of the mutants. In addition to this, the residual substitutions were also found to alter the conformations of the active sites in mutants.

## Urinary Bladder Neoplasms

### **CD 10 expression intensity in various grades and stages of urothelial carcinoma of urinary bladder.**

Atique, Muhammad; Abbasi, Muhammad Sajjad; Jamal, Shahid; Khadim, Muhammad Tahir; Akhtar, Farhan; Jamal, Nighat

*E-mail: drsajjadabbasi77@yahoo.com*

Armed Forces Institute of Pathology [AFIP] - Department of Histopathology

**JCPSP-Journal of the College of Physicians and Surgeons Pakistan** 2014; 24 (5): 351-355 (23 ref.)

**Keywords:** Nephrylsin; Immunohistochemistry; Neoplasm Grading; Neoplasm Staging; Urothelium

**Abstract:** To evaluate CD 10 expression in urothelial carcinoma of the urinary bladder and the association of immunohistochemical [IHC] CD10 expression intensity with grade and stage. Study Design: Descriptive cross-sectional analytical study. Armed Forces Institute of Pathology, Rawalpindi, from January to December 2011. Methodology: Fifty consecutive cases of urothelial bladder carcinomas, obtained through transurethral resections, were included in this study. Hematoxylin-eosin [HE] stained sections from each case were re-evaluated histopathologically according to WHO 2004 grading system. The TNM system was used for pathologic staging. On selected slides IHC CD10 marker was applied and a semiquantitative scoring for its expression based on the percentage of positive cells and intensity was performed. Data was entered and analysed on SPSS version 17. Fisher's exact test was used to compare grades, stages of urothelial carcinoma with CD 10 expression and age groups.  $P < 0.05$  was taken as level of significance. Results: Urothelial carcinoma was more common in males. The male to female ratio was 9:1. The older patients > 50 years had higher grade and stage as compared to the younger patients. All cases of high grade urothelial carcinoma showed higher positivity for CD 10. Twenty cases (86.95%) of high grade urothelial carcinoma were positive with +2 immunostaining while 3 cases [13.04%] were positive with +1 staining. None of the tumors of stage pTa was positive for CD 10 expression. Of all patients with stage pT 1 tumor, 1 case [5.3%] was CD 10 negative and 17 cases [89.9%] were CD 10 positive having +1 staining with 5 - 50% staining and 1 case [5.3%] had +2 staining with more than 50% expression. Out of all patients with stage pT 2, no tumor was CD 10 negative, 3 [13.6%] patients were CD 10 positive with +1 staining and 19 [86.4%] with stage pT 2 tumor had stained positive with +2 staining. CD 10 expression was greater in high grade and invasive urothelial carcinomas; it may be associated with tumor progression in bladder cancer pathogenesis.

## diagnosis

### **Diagnostic accuracy of high resolution MR imaging in local staging of bladder tumors.**

Bashir, Usman; Ahmed, Irfan; Bashir, Omar; Azam, Muhammad; Faruqi, Zia Sulman; Najam Uddin

*E-mail: drusmanbashir@gmail.com*

Royal Marsden Cancer Hospital - Department of Radiology

**JCPSP-Journal of the College of Physicians and Surgeons Pakistan** 2014; 24 (5): 314-317 (24 ref.)

**Keywords:** Magnetic Resonance Imaging; Neoplasm Staging

**Abstract:** To determine the diagnostic accuracy of high-resolution MR imaging done at 1.5T in distinguishing bladder-restricted tumor from non-bladder-restricted tumor and compare the mean short axis dimension of metastatic pelvic lymph nodes with benign pelvic lymph nodes. Analytical study. Shaukat Khanum Memorial Cancer Hospital, Lahore, Pakistan, from March 2008 to July 2011. Patients with bladder cancer were enrolled. Based on pathologic T-staging following radical cystectomy, patients were assigned to one of two groups. Patients with stage T1 and T2 disease were assigned to the bladder-restricted tumor [BRT] group and those with stage T3 and T4 disease to the non-bladder-restricted tumor [NBRT]. High-resolution unenhanced MR imaging done prior to cystectomy was reviewed retrospectively [1.5 T MRI unit; GE Healthcare]. Results from MR imaging-based categorization were compared with pathology reports to fulfill the objective. Mean short-axis diameter of largest visible lymph nodes in patients with nodal metastasis was compared with mean short-axis diameter of largest visible lymph nodes in patients with benign lymph nodes. The accuracy of MRI in differentiating distinguishing bladder-restricted tumor from non-bladder-restricted tumor was 67.72%. The mean short axis diameter of metastatic lymph nodes was greater than that of non-metastatic lymph nodes, i.e., 7.4 mm and 5.4 mm respectively. Conventional high resolution 1.5T MRI does not appear to offer advantage over imaging done at low field strength scanners.

## Uterine Prolapse

### surgery

#### **Vaginal hysterectomy and sacrospinous colpopexy for uterovaginal prolapse: anatomical and functional outcomes.**

Qatawneh, Ayman

[E-mail:aymenfida@yahoo.com](mailto:aymenfida@yahoo.com)

The University of Jordan - Faculty of Medicine - Department of Obstetrics and Gynaecology

**Jordan Medical Journal** 2013; 47 (4): 331-339 (24 ref.)

**Keywords:** Hysterectomy, Vaginal; Retrospective Studies; Pelvic Organ Prolapse

**Abstract:** The surgical management of pelvic organ prolapse requires a combination of techniques. This study evaluated the anatomical outcomes, functional outcomes and complications of vaginal hysterectomy and sacrospinous colpopexy in women with uterovaginal prolapse. We retrospectively evaluated 85 women who underwent vaginal hysterectomy and sacrospinous colpopexy over a period of 3 years. The primary outcome measures included anatomical outcome success rates [as assessed by pelvic organ prolapse quantification, POP-Q], pelvic floor function outcomes and complication rates. At a mean follow-up duration of 35 months [range: 12-60], the overall objective success [for all compartments] was 81% [69/85], while the objective success rates for the anterior, posterior and apical compartments were 82% [70/85], 89% [76/85] and 92% [78/85]. Respectively, there were no stage 3 or 4 recurrences at any site. Overactive bladder [OAB] symptoms improved significantly following the surgery, while new-onset stress urinary incontinence occurred in 5 patients. There was no significant change in sexual activity or dyspareunia. Surgical complications were minor. The combination of vaginal hysterectomy and sacrospinous colpopexy for the treatment of uterovaginal prolapse is reasonably effective in restoring pelvic anatomy and results in favourable pelvic function with an acceptable complication rate.

## Varicocele

#### **Mutation analysis of TNP1 gene in infertile men with varicocele.**

Heidari, Mohammad Mehdi; Khatami, Mehri; Talebi, Ali Reza; Moezzi, Fahime

[E-mail:Heidarimm@yazd.ac.ir](mailto:Heidarimm@yazd.ac.ir)

Yazd University - Faculty of Science - Department of Biology

**IJRM-Iranian Journal of Reproductive Medicine** 2014; 12 (4): 257-262 (31 ref.)

**Keywords:** Infertility, Male; Chromosomal Proteins, Non-Histone; Polymorphism, Single-Stranded Conformational; Mutation

**Abstract:** Varicocele is associated with the failure of ipsilateral testicular growth and development, and the symptoms of pain and reduced fertility. The highly condensed structure of the sperm nuclear chromatin is provided by proper expression of Transition Nuclear Protein [TNP] genes, so any dysregulatory expression of these genes results in abnormal spermatogenesis and infertility. The aim of present study was to assess the association between TNP1 mutations and varicocele in Iranian infertile men. Analysis of association between TNP1 gene mutation and varicocele phenotype was performed using PCR and Single-Stranded Conformational Polymorphism technique and DNA sequencing in 82 varicocele infertile men and 80 control subjects. Sequence analysis was identified one variant in this gene that found in 15 infertile men and was absent in control group. This variant was a single nucleotide polymorphism that were identified in the intron region of this gene at position g.IVS1+75T>C. The effect of this nucleotide substitution in intronic region of the TNP1 gene and their role on expression remains to be determined.

## Vascular Endothelial Growth Factor A

### blood

#### **Vascular endothelial growth factor expression in peripheral blood of patients with pregnancy induced hypertension syndrome and its clinical significance.**

Ren, Yanfang; Wang, Huiling; Qin, Haixia; Yang, Jun; Wang, Yuhong; Jiang, Shan; Pan, Ying

[E-mail: yanfangqrena@126.com](mailto:yanfangqrena@126.com)

The First Affiliated Hospital of Xinxiang Medical University - Department of Obstetrics and Gynecology

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 634-637 (20 ref.)

**Keywords:** Hypertension, Pregnancy-Induced-blood; Pregnancy; Polymerase Chain Reaction; Enzyme-Linked Immunosorbent Assay

**Abstract:** This study was conducted to detect vascular endothelial growth factor [VEGF] levels in peripheral blood of patients with pregnancy-induced hypertension [PIH] syndrome and to investigate VEGF correlation with PIH occurrence. Double-antibody enzyme-linked immunosorbent assay and fluorescent quantitative polymerase chain

reaction were used to detect VEGF levels in the peripheral blood of non-pregnant women [normal group, 30 cases], normal pregnant women [pregnancy group, 30 cases] and PIH patients [PIH group, 30 cases]. VEGF level in the pregnancy group was significantly higher than in the normal group, and the difference between these two groups was significant [ $P < 0.001$ ]. In the pregnancy group, VEGF reached the maximum level at the metaphase stage of pregnancy and started to decrease at advanced pregnancy. VEGF level in the PIH group was significantly lower than in the pregnancy group at advanced pregnancy [ $P < 0.01$ ], and VEGF level significantly and gradually decreased with PIH aggravation [ $P < 0.05$ ]. The significant decrease of VEGF level after pregnancy was possibly an important factor of PIH pathogenesis.

## Vascular Endothelial Growth Factor Receptor-2

### antagonists and inhibitors

#### **Ab-initio and conformational analysis of a potent VEGFR-2 inhibitor: a case study on motesanib.**

Ebadi, Ahmad; Razzaghi Asl, Nima; Shahabipour, Sara; Miri, Ramin  
Shirai University of Medical Sciences - Medicinal and Natural Products Chemistry Research Center

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 405-415 (40 ref.)

**Keywords:** Indoles; Niacinamide-analogs and derivatives; Neoplasms

**Abstract:** Vascular endothelial growth factor receptor-2 [VEGFR-2]; a cell surface receptor for vascular endothelial growth factors, is a key pharmacological target involved in the cell proliferation/angiogenesis. It has been revealed that VEGFR-2 induces proliferation through activation of the extracellular signal-regulated kinases pathway. In this regard, targeting the VEGFR-2 has been considered as an efficient route to develop anti-tumor agents. Motesanib is a small-molecule antagonist of VEGFR-1, 2, and 3 [IC<sub>50</sub>s; 2 nM, 3 nM, 6 nM, respectively]. It is an experimental drug candidate undergoing clinical trials against some types of cancer. In the present study, Motesanib [AMG 706] was evaluated in terms of its binding energies with individual amino acids of VEGFR-2 active site [amino acid decomposition analysis]. For this purpose, functional B3LYP associated with split valence basis set using polarization functions [Def2-SVP] was used. Comparative Conformational analysis of the ligand in optimized and crystallographic states revealed that Motesanib does not necessarily bind to the VEGFR-2 active site in its minimum energy conformer.

## Vena Cava, Inferior

### pathology

#### **A case of hepatic cyst-induced inferior vena cava thrombosis.**

Moon, Jaechol; Heo, Dahee; Han, Sanghoon  
Jeju National University Hospital - Department of Internal

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 667-670 (18 ref.)

**Keywords:** Thrombosis; Cysts; Liver Diseases; Tomography, X-Ray Computed; Anticoagulants

**Abstract:** A 92-year-old woman visited the hospital with edema of both lower extremities. Computed tomography revealed her inferior vena cava [IVC] was compressed by a massive hepatic cyst. A massive IVC thrombosis and pulmonary thromboembolism [PTE] were also observed. Medical treatment rather than radiologic intervention was preferred because of the patient's advanced age and poor performance status. IVC thrombosis and PTE disappeared after 6 months of anticoagulation therapy. To the best of our knowledge, this is the first study in the English literature to report IVC thrombosis caused by congenital hepatic cysts that was treated without vascular intervention.

## Verapamil

### pharmacokinetics

#### **Metabolite parameters as an appropriate alternative approach for assessment of bioequivalence of two verapamil formulations.**

Haeri, Azadeh; Javadian, Bahareh; Saadati, Roonak; Dadashzadeh, Simin  
Shahid Beheshti University of Medical Sciences - School of Pharmacy - Department of Pharmaceutics

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 383-391 (23 ref.)

**Keywords:** Therapeutic Equivalency; Chemistry, Pharmaceutical; Verapamil-analogs and derivatives; Chromatography, High Pressure Liquid

**Abstract:** A bioequivalence study of two verapamil formulations [generic verapamil tablets and Isoptin tablets] was performed by comparing pharmacokinetic parameters of the parent drug and its major metabolite, norverapamil

following a single dose administration of 80 mg verapamil hydrochloride in 22 healthy volunteers according to a randomized, two-period, crossover-design study. Moreover, the feasibility of proving bioequivalence of verapamil oral dosing form by means of norverapamil pharmacokinetic parameters was evaluated. Concentrations of verapamil and norverapamil were quantified in plasma using a validated high-performance liquid chromatography [HPLC] with fluorescence detection. The 90% CIs for the log-transformed ratios of verapamil C<sub>max</sub> [maximum plasma concentration] and AUC [area under the plasma concentration-versus-time curve from time zero to the infinity] were 73 to 101 and 80 to 103, respectively. Similarly, the corresponding ranges for norverapamil were 80-100 and 84-103, respectively. According to the parent drug data, the 90% confidence intervals around the geometric mean ratio of AUC happened to fit within preset bioequivalence limits of 80-125%, whereas those for C did not. The 90% confidence intervals for both C<sub>max</sub> and AUC of norverapamil met preset bioequivalence limits. The AUC and C<sub>max</sub> of metabolite, when compared to parent drug, showed a much lower degree of variability and the 90% confidence intervals of the metabolite were therefore narrower than those of the parent drug. These observations indicate that bioequivalence studies using metabolite, norverapamil, could be a more suitable and preferable approach to assess bioequivalence of verapamil formulations due to its much lower variability and therefore lower number of volunteers that are required to conduct the study.

## Vitamin A

### pharmacology

#### **Effects of administration of vitamin A to pregnant dams on the skin of the fetuses of albino mice.**

Naseer, Uzma; Khalid, Sara; Tahir, Mohammad; Latif, Waqas  
CMH, Lahore Medical College [LMC] - Department of Anatomy

**Biomedica** 2014; 30 (1): 44-47 (31 ref.)

**Keywords:** Pregnancy, Animal-drug effects; Skin-drug effects; Fetus; Mice

**Abstract:** For differentiation and maintenance of epithelial cells in vitro and vivo wider the influence of retinoic acid treatment, skin seems to be a major target organ for both the normal and pathological states. The current study was conducted to evaluate the effects of retinoic acid on fetal skin if given to albino mice during pregnancy. Twelve pregnant albino mice were divided into two groups of 6 each; the experimental group was given 60 mg/kg/day of retinoic acid [RA] dissolved in 0.1 ml of olive oil orally on 7, 8 and 9 day of gestation. Fetuses were delivered and dissected on 18<sup>th</sup> day of gestation; skin samples were removed and processed for microscopic study. Histological examination of fetal skin in RA treated group showed increased keratinocyte proliferation resulting in increased number of epidermal cell layers and increased epidermal thickness. It also inhibited the development of hair follicles which are seen in the form of rudimentary buds in the dermis. So its usage during pregnancy should be warranted. Given the essential role of retinoids in epidermal differentiation and their effectiveness in the treatment of several skin disorders it is important to see its histological effects on skin.

## Vitamin E

#### **The role of vitamin E in human health and some diseases.**

Rizvi, Saliha; Raza, Syed T.; Ahmed, Faizal; Ahmad, Absar; Abbas, Shania; Mahdi, Farzana  
*E-mail: [tasleem24@gmail.com](mailto:tasleem24@gmail.com)*

Medical College India - Department of Biochemistry, ERA'S Lucknow

**SQUMJ-Sultan Qaboos University Medical Journal** 2014; 14 (2): 143-151 (67 ref.)

**Keywords:** Health; Antioxidants; Vitamin E Deficiency; Tocopherols; Cardiovascular Diseases; Neoplasms; Cataract; Alzheimer Disease; Acquired Immunodeficiency Syndrome; HIV; Immunity

**Abstract:** Vitamin E is the major lipid-soluble component in the cell antioxidant defence system and is exclusively obtained from the diet. It has numerous important roles within the body because of its antioxidant activity. Oxidation has been linked to numerous possible conditions and diseases, including cancer, ageing, arthritis and cataracts; vitamin E has been shown to be effective against these. Platelet hyperaggregation, which can lead to atherosclerosis, may also be prevented by vitamin E; additionally, it also helps to reduce the production of prostaglandins such as thromboxane, which cause platelet clumping. The current literature review discusses the functions and roles of vitamin E in human health and some diseases as well as the consequences of vitamin E deficiency. The main focus of the review is on the tocopherol class of the vitamins.

## Vitamin K 3

### analysis

#### **GC-FID and HPLC-DAD methods for the determination of menadione sodium bisulphite directly and by converting menadione sodium bisulphite to menadione in pharmaceutical preparation.**

Demirkaya Miloglu, Fatma; Kadioglu, Yucel; Senol, Onur

[E-mail:fdkaya@atuni.edu.tr](mailto:fdkaya@atuni.edu.tr)

Alaturk University - Faculty of Pharmacy - Department of Analytical Chemistry

**IJPR-Iranian Journal of Pharmaceutical Research** 2014; 13 (2): 353-364 (21 ref.)

**Keywords:** Chromatography, Gas; Flame Ionization; Chromatography, High Pressure Liquid; Pharmaceutical Preparations

**Abstract:** GC-FID and HPLC-DAD methods were developed for determination of menadione [MN] and menadione sodium bisulphite [MSB]. By means of each method, quantitative analysis of MSB in commercial pharmaceutical was performed in both direct analysis of MSB and analysis of MN by converting MSB to MN with sodium carbonate. GC-FID method was carried out on the HP-5 capillary column using nitrogen gas. HPLC-DAD method was achieved on the reversed phase C[8] column by using a mobile phase consisting methanol and water. The calibration curves of GC-FID and HPLC-DAD for both analytes were linear in the same concentration range [0.5-20 microg/mL]. Both methods were validated in terms of precision, accuracy, recover) and limits of detection [LOD] and quantisation [LOQ]. Although LOD values of HPLC-DAD method [0.010 microg/mL for MN and 0.005 pg/mL for MSB] is lower than obtained values with GC-FID method [0.04 microg/mL for MN and 0.06] microg/mL for MSB], both methods gave similar and favorable results in terms of precision and accuracy. The Student's t-test was applied to investigate the significant of the different between the results of MSB determination with direct analysis of MSB and analysis of MN by converting MSB to MN by means of GC-FID and HPLC-DAD method in dosage form.

## Vitamins

#### **Multivitamin versus multivitamin-mineral supplementation and pregnancy outcomes: a single-blind randomized clinical trial.**

Asemi, Zatollah; Samimi, Mansooreh; Tabassi, Zohreh; Esmailzadeh, Ahmad

Kashan University of Medical Sciences - Research Center for Biochemistry and Nutrition in Metabolic Diseases

**IJPM-International Journal of Preventive Medicine** 2014; 5 (4): 439-446 (43 ref.)

**Keywords:** Minerals; Pregnancy Outcome; Single-Blind Method; Micronutrients; Anthropometry; Birth Weight; Pregnancy

**Abstract:** Increased requirement and decreased dietary intakes of micronutrients during pregnancy might affect maternal health and pregnancy outcomes. This study was aimed to examine the effects of two types of multiple micronutrient supplementations on pregnancy outcomes in Kashan, Iran. In a randomized single-blind controlled clinical trial, 104 primigravid singleton pregnant women aged 18-30 years were randomly assigned to receive either a multivitamin [n = 51] or a multivitamin-mineral [n = 53] supplements for 20 weeks. Participants consumed supplements once a day at week 16 of gestation. Maternal anthropometric data as well as newborn's weight, height, head circumference and 5-min Apgar score were also determined. Independent samples t-test was used for comparing between-group means. Multivariate linear regression analysis was used to identify determinants of newborn's weight, height and head circumference. Women taking multivitamin-mineral supplements gained marginally less weight until week 28 than those taking multivitamin supplements (weight at week 28 of gestation: 67.5 +/- 11.4 vs. 71.6 +/- 10.3 kg, P = 0.06). Mean body mass index at week 28 [25.8 +/- 4.0 vs. 28.4 +/- 3.7 kg/m<sup>2</sup>], P = 0.001] as well as at delivery [28.0 +/- 3.9 vs. 30.1 +/- 3.8 kg/m<sup>2</sup>], P = 0.006] was lower among women taking multivitamin-mineral supplements than those taking multivitamin supplements. Although no significant difference was seen in newborns' height and Apgar score between the two groups, mean birth weight [3.3 +/- 0.4 vs. 3.1 +/- 0.4 kg, P = 0.04] and head circumference [35 +/- 1.4 vs. 34 +/- 1.3cm, P < 0.0001] of the infants whose mothers receiving multivitamin-mineral supplements were higher than those whose mothers received multivitamins. Multivitamin-mineral use by pregnant women was a significant predictor of infants' weight [P = 0.191, P = 0.03] and head circumference [p = 0.907, P = 0.005]. In conclusion, we found that birth weight and head circumference was increased in infants whose mothers received multivitamin-mineral supplements for 5 months during pregnancy compared with infants whose mothers received multivitamin supplements.

## Waste Disposal Facilities

### Leak marking scheme for construction quality testing of geomembrane liners in landfills.

Guan, S.P.; Yu, Z.H.; Zhong, S.

Shandong Institute of Business and Technology

*International Journal of Environmental Research* 2014; 8 (2): 447-452 (22 ref.)

**Keywords:** Refuse Disposal

**Abstract:** Landfill is the major method of solid waste disposal in developing countries. To protect soil and groundwater from contamination, anti-seepage systems have to be installed in landfills. However, during the construction of anti-seepage system, many factors can result in holes in geomembrane liners. For the purpose of improving construction quality, the construction company needs to find the leaks in geomembrane liners and analyze the damage causes according to the positions after construction. The electrical method can effectively test the integrity of geomembrane liners. In this paper, we combine the electrical method with the wireless location technology and bring forth a leak marking scheme. The working flow of the scheme is as follows: place two acoustic transceivers on two vertices of the detection area; after detecting the leaks with the electrical method, calculate the leaks' relative coordinates in the detection area through acoustic ranging and, then, mark positions of leaks in the landfill. At last, we design acoustic signals for ranging, analyze their performance on anti-interference, and design the leak marking algorithm.

## Water

### A critical look at social impact evaluation of dam construction by revised SIMPACTS software - a case study of Alborz dam in northern Iran.

Tajziehchi, S.; Monavari, S.M.; Karbassi, A.R.; Shariat, S.M.; Khorasani, N.; Narimisa, P.

[E-mail:tajziehchi\\_sanaz@gmail.com](mailto:tajziehchi_sanaz@gmail.com)

Islamic Azad University - Science and Research Branch - Department of Environment and Energy

*International Journal of Environmental Research* 2014; 8 (2): 329-334 (14 ref.)

**Keywords:** Social Change; Software

**Abstract:** There is much discussion going on lately whether dam construction is economic or not in terms of social consequences. Accordingly, various techniques and software have been released to estimate the real social cost of dam construction among which, the Software SIMPACTS has been used extensively by researchers, worldwide. The present version of SIMPACTS software only focuses on adverse effects of hydropower dams regardless of their potential positive impacts. In order to fix the existing bugs, the software was modified by programming a new cost-benefit model in which the costs of power generation, irrigation and drainage, aquatics, and potable water as well as the benefits from electricity sales, elimination of pollutants, increased cultivated area, aquaculture practice and also prevention of flood in the area, were included. The obtained results revealed that the total costs of the Alborz Dam, including the costs added to the modified model, will raise from 164 US\$/Mwh calculated by the original version of the software to US\$ 1049 per MWh. Besides, total revenues resulting from the above mentioned variables added up to the model reaches US\$ 1994 per MWh. Therefore, the cost over benefit ratio for construction of Alborz Dam is equal to 1.5. In other words, a sum of US\$ 28 million would be expected as the annual net profit of the project which has totally been overlooked in the original model.

### Effects of magnetized water on ovary, pre-implantation stage endometrial and fallopian tube epithelial cells in mice.

Hafizi, Leili; Gholizadeh, Mostafa; Karimi, Mohammad; Hosseini, Golkoo; Mostafavi Toroghi, Hesam; Haddadi, Mehdi; Rezaiean, Amin; Ebrahimi, Mahmoud; Meibodi, Neda Emami

Mashhad University of Medical Sciences - Department of Obstetrics and Gynecology

*IJRM-Iranian Journal of Reproductive Medicine* 2014; 12 (4): 243-248 (26 ref.)

**Keywords:** Ovary; Endometrium; Fallopian Tubes; Epithelial Cells; Fertility; Mice

**Abstract:** Magnetized water has made many improvements in industry, agriculture and medicine. However its utilization in medicine still remains controversial. In this study we aimed to investigate the effects of magnetized water on height of epithelial cells in pre-implantation stage endometrium and fallopian tube and number of corpus lutea in female mice. Eighty female NRM mice were recruited to this experimental study and randomly divided into two groups: the control group which drank normal water and the experimental [case] group which drank magnetized water for 2 weeks. Super-ovulation was induced in these mice and then they were mated with male mice as well. Samples of ovary, uterus and fallopian tube were obtained at the pre-implantation stage. Then, after preparation, the number of corpus lutea in each ovary was counted and the height of fallopian and endometrial epithelial cells was measured by light microscopy. Data analysis showed a significant increase in the mean number of corpus lutea and the height of epithelial cells in fallopian tube comparing the case with the control group [ $p=0.01$ ,  $p=0.002$  respectively] whereas uterus epithelial cells of the case group showed insignificant increase in height, in compare with the control group [ $p=0.052$ ]. Our results suggest that magnetized water intake increases the number of corpus lutea and the height of fallopian tube epithelial cells. Further research is needed to determine whether this will increase in the success rate of fertility.

## chemistry

### Photocatalytic decomposition of low-concentrated trichloroethylene and tetrachloroethylene in water.

Grzechulska Damszel, J.; Grzeskowiak, M.; Przepiorski, J.; Morawski, A.W  
*E-mail:joanna.grzechulska@zut.edu.pl*

West Pomeranian University of Technology - Institute of Chemical and Environment Engineering

**International Journal of Environmental Research** 2014; 8 (2): 347-352 (26 ref.)

**Keywords:** Trichloroethylene; Tetrachloroethylene; Groundwater; Water Purification

**Abstract:** The photocatalytic decomposition of trichloroethylene [TCE] and tetrachloroethylene [PCE] in water was studied. TCE and PCE were present in water at very low concentrations of about 15 microg/dm<sup>3</sup>. This concentration level corresponds to the one occasionally occurring in groundwater. Results of this research confirmed usefulness of the photocatalytic process for successful removal of low-concentrated TCE and PCE from water. Removal of trichloroethylene and tetrachloroethylene from water can be achieved by application of the photocatalytic process over titanium dioxide. It was confirmed that both suspended and immobilized modes of the photocatalytic process give comparable results. Therefore it is recommended to employ the immobilized system as more beneficial from the economical point of view. Presented studies revealed that very low amounts of TCE and PCE can be removed from water using the photocatalytic process. This method could be than applied for purification of groundwater occasionally polluted with the small amounts of TCE and PCE.

## Water Microbiology

### Microbiological contamination in water filtration plants in Islamabad.

Aliya, Hisam; Mahmood Ur Rahman; Kadir, Ehsan; Tariq, Naseer Alam; Masood, Sumaira

*E-mail:aaleya@yahoo.com*

Army Medical College [AMC] - Department of Community Medicine

**JCPSP-Journal of the College of Physicians and Surgeons Pakistan** 2014; 24 (5): 345-350 (20 ref.)

**Keywords:** Equipment Contamination; Water; Filtration; Cross-Sectional Studies; Enterobacteriaceae; Escherichia coli

**Abstract:** To determine the frequency of microbiological contamination of water in different water filtration plants in Islamabad. Descriptive cross-sectional study. Water Filtration Plants [WFP] in different sectors of Islamabad, from April to September 2012. Water samples were collected in sterilized bottles according to the standard water sampling protocol from site and transported to Pakistan Council for Research in Water Resources [PCRWR] for analysis. Microbiological quality of water was determined in terms of total coliforms [ $< 2.0$  MPN/100 ml] and Escherichia coli [ $< 2.0$  MPN/100 ml]. Microbiological contaminated water was defined the sample which had more than 2.0 MPN per 100 ml of either total coliforms or Escherichia [E.] coli. Thirty two WFP were analyzed for microbiological contamination. E. coli was present in 8 [25.0%] water samples, while 24 [75.0%] water samples were free from it. Total coliforms were present in 13 (40.6%) of the samples of WFP, while 19 [59.3%] samples were free from total coliform. Faecal coliforms were present in 8 [25.0%] and absent in 24 [75.0%] samples. Both E. coli and total coliform were present in 8 [25.0%] samples. Nine [59.3] WFP were free from E. coli, total coliform and faecal coliform. Statistically, no significant association was found [ $p > 0.05$ ] between microbiological contamination and the sectors. Less than half of the water samples of the WFP were contaminated while certain sectors showed more frequent contamination than others.

## Yoga

### Preventive effects of a three-month yoga intervention on endothelial function in patients with migraine.

Naji Esfahani, Hajar; Zamani, Mahsa; Marandi, Seyed Mohamad; Shaygannejad, Vahid; Javanmard, Shaghayegh Haghjooy

Isfahan University of Medical Sciences - Applied Physiology Research Center - Department of Physiology

**IJPM-International Journal of Preventive Medicine** 2014; 5 (4): 424-429 (31 ref.)

**Keywords:** Endothelium; Migraine Disorders; Cell Adhesion Molecules; Intercellular Adhesion Molecule-1; Vascular Cell Adhesion Molecule-1

**Abstract:** Migraine is a neurovascular disorder and any interventions improving endothelial function may contribute to its treatment and prevention of vascular complications like ischemic stroke. Yoga has been shown to have several beneficial effects on cardiovascular systems. However, no randomized controlled studies to date have investigated its effects on endothelial function of migraineurs. A total of 42 women patients with migraine were enrolled and randomized into either a Yoga exercise group or a control group. The control group received only medication for 12 weeks and the Yoga group was placed in yoga training program in addition to the same medical treatment. Blood test was given from all patients in order to measure plasma levels intercellular adhesion molecule [ICAM] and vascular cell adhesion molecule [VCAM] after yoga training program. Totally 32 patients were participated in the final analyses [yoga: n = 18, control: n = 14]. By analyzing data between yoga and control groups after the treatment period, there was

a significant decreased in plasma level of VCAM in yoga group compare with the control group [15.29 +/- 2.1 ng/ml vs. 21.70 +/- 3.0 ng/ml,  $P < 0.05$ ], whereas there was no significant difference in ICAM level between groups [19.1 +/- 1.8 ng/ml vs. 20.97 +/- 1.9 ng/ml  $P > 0.05$ ]. It seems that yoga exercises, as a complementary treatment beside pharmacological treatments, can be potentially an effective way of improving vascular functions in migraineurs.

## Zinc

### blood

#### **Reference range of zinc in adult population [20-29 years] of Lahore, Pakistan.**

Hussain, Warda; Mumtaz, Asim; Yasmeen, Farzana; Khan, Sana Qayyum; Butt, Toqeer

[E-mail:drwwali@gmail.com](mailto:E-mail:drwwali@gmail.com)

Shalamar Medical fr Dental College - Pathology Department

**Pakistan Journal of Medical Sciences** 2014; 30 (3): 545-548 (24 ref.)

**Keywords:** Reference Values; Adult; Cross-Sectional Studies; Spectrophotometry, Atomic

**Abstract:** To determine the reference range of zinc in adult population [age range 20 to 29 years] of Lahore. It was a descriptive cross sectional study which was carried out from Jan- August 2012 in Chemical Pathology Department of University of Health Sciences, Lahore. Serum zinc concentration was measured by name atomic absorption spectrometry in randomly selected 450 healthy adults aged 20 to 29 years. After application of exclusion criteria reference values were determined in apparently healthy subjects according to guidelines of International Federation of Clinical Chemistry. The data was entered and analyzed using SPSS version 20.0. Serum Zn levels was expressed as Mean +/- SD. A total of 450 healthy subjects were included in this study. Out of these, 234 were females. Mean age was 25 +/- 0.13years. The mean concentration of zinc in serum of healthy individual was 24.02 +/- 7.03  $\mu\text{mol/L}$  [rangel 1.47-36.72]. The mean +/- SD for males subjects were 22.33 +/- 6.42  $\mu\text{mol/L}$ [range11.93-32.4]. Similarly the mean +/- SD for females were 21.72 +/- 7.34  $\mu\text{mol/L}$  [range9.94-36.87]. This study presents reference range for serum zinc concentration in adult population of Lahore. The results showed that there is significant difference in serum level of zinc among different countries. This study will help us in establishing reference ranges of trace elements on larger population in future.





## Appendix I

# Author Index



- Abbas, Maryam**  
DRUG PRESCRIPTIONS
- Abbas, Shania**  
VITAMIN E
- Abbasi, Arezo Mona**  
MULTIPLX POLYMERASE CHAIN REACTION
- Abbasi, Muhammad Sajjad**  
URINARY BLADDER NEOPLASMS
- Abdellatif, Mohammed**  
PREGNANCY, TRIPLET
- AbdelMalek, Sherin W.**  
KNEE (pathology)
- Abdelmogheth, Anas A.**  
CYSTINOSIS (therapy)
- Abdollahi Mohammad**  
MYOCARDIAL INFARCTION (drug therapy)
- Abdul Manan**  
MOUTH NEOPLASMS
- Abdul Waheed**  
SEPSIS (blood)
- Abdulla, Salih A.**  
EPILEPSY
- Aboelmaaty, Walaa S.**  
BIOMPHALARIA (drug effects)
- Abouzaripour, Morteza**  
LASER THERAPY, LOW-LEVEL
- Abu Amara, Hend M.**  
INDOMETHACIN (chemistry)
- Abu Dahab, Rana**  
ANTI-INFLAMMATORY AGENTS,  
NON-STEROIDAL (pharmacology)
- Abu Ghazaleh, Suha B.**  
DENTAL CARIES (epidemiology)
- Abu Oliem, Attallah Saleh**  
PHARMACISTS
- Abuirmeileh, Amjad**  
MENTHA PIPERITA
- Abulfatih, Najat M.**  
BREAST NEOPLASMS (epidemiology)
- Adei, E.**  
METALS, HEAVY
- Afhami, Mohammadreza**  
MASKS
- Afridi, Faisal Iqbal**  
NATRIURETIC PEPTIDE, BRAIN (diagnostic use)
- Aftab, Akhunzada Muhammad**  
CATARACT EXTRACTION
- Afzal, M.**  
HERNIA, VENTRAL (surgery)
- Agbo, Christian Ejiofor**  
HEARING AIDS
- Aghamiri, Zahra**  
ASCORBIC ACID (analysis)
- Ahmad, Abeer H.**  
ENDOMETRIAL NEOPLASMS (genetics)
- Ahmad, Absar**  
VITAMIN E
- Ahmad, Bashir**  
THUMB (abnormalities)
- Ahmad, Mirza Sultan**  
SEPSIS (blood)
- Ahmad, Tanweer**  
NEUROMA, ACOUSTIC (diagnosis)
- Ahmadi, Farhad**  
METAPROTERENOL
- Ahmadi, Maryam**  
ELECTRONIC PRESCRIBING
- Ahmed, Faizal**  
VITAMIN E
- Ahmed, Hameeda Bashir**  
ALVEOLAR BONE LOSS (diagnosis)
- Ahmed, Imran**  
CHILD WELFARE
- Ahmed, Irfan**  
URINARY BLADDER NEOPLASMS (diagnosis)
- Ahmed, Nisar**  
BETA-THALASSEMIA
- Ahwazi, Z. Chabi**  
NOISE
- Ai, Jafar**  
ENDOMETRIUM (drug effects)
- Ai, Ning**  
BREAST NEOPLASMS (pathology)
- Aijaz, Nighat**  
MUNCHAUSEN SYNDROME BY PROXY  
(diagnosis)
- Ajami, Marjan**  
CALORIC RESTRICTION  
CAFFEINE
- Ajdarkosh, Hossein**  
LIVER CIRRHOSIS (congenital)
- Akgul, E.Ozgur**  
AMPUTATION
- Akgun, Metin**  
HEMOPTYSIS

- Akhondi, Mohammad Mehdi**  
SPERMATOGONIA
- Akhtar, Farhan**  
URINARY BLADDER NEOPLASMS
- Akilli, Nazire belgin**  
STROKE (mortality)
- Akinci, Emine**  
STROKE (mortality)
- Akoto, O.**  
METALS, HEAVY
- Akram, Nishat**  
DIABETES, GESTATIONAL (diagnosis)
- Akrami, Seyed Mohammad**  
LASER THERAPY, LOW-LEVEL
- Aktaruzzaman, M.**  
METALS, HEAVY
- Al Abdallah, Mariam**  
DENTAL CARIES (epidemiology)
- Al Abri, Mohammed**  
BLOOD GLUCOSE
- Al Ajlouni, Jihad M.**  
KNEE (pathology)
- Al Ashhab, Shereen**  
PRESSURE ULCER (epidemiology)
- Al Baluishi, Sheikha**  
MYCOSES (diagnosis)
- Al Busaidi, Ibrahim**  
CESAREAN SECTION
- Al Bustami, Faraj**  
GASTRIC MUCOSA (drug effects)
- Al Dughaishi, Tamima**  
PREGNANCY, TRIPLET
- Al Farsi, Khalil**  
ERYTHROCYTES
- Al Gharaibeh, Mohammad M.**  
PAPAVERACEAE
- Al Haddabi, Hamood**  
BEHCET SYNDROME (blood)
- Al Hadrami, Atka**  
PREGNANCY, TRIPLET
- Al Hashmi, Khamis**  
BLOOD GLUCOSE
- Al Hiari, Yusuf M.**  
PHENYLETHYL ALCOHOL (analogs and derivatives)
- Al Horani, Eman**  
PRESSURE ULCER (epidemiology)
- Al Huneini, Mohammed**  
ERYTHROCYTES
- Al Jabra, Rabi'a Jamil**  
PHARMACISTS
- Al Khabori, Murtaadha**  
ERYTHROCYTES
- Al Khitan, Sayel**  
HYPOSPADIAS (surgery)
- Al Kindy, Hussein**  
CYSTINOSIS (therapy)
- Al Lawati, Fatma**  
MYCOSES (diagnosis)
- Al Layla, Abdul Monem**  
GRANULOMA, GIANT CELL (diagnosis)
- Al Maani, Amal S.**  
MYCOSES (diagnosis)
- Al Mamari, Ali**  
BLOOD GLUCOSE
- Al Mannai, Mariam**  
OVERWEIGHT (epidemiology)
- Al Maqballi, Salima R.S.**  
GLOMERULAR FILTRATION RATE
- Al Marzog, Qazi**  
OVERWEIGHT (epidemiology)
- Al Masri, Ihab M.**  
PAPAVERINE (pharmacology)
- Al Mehza, Hala E.**  
BREAST NEOPLASMS (epidemiology)
- Al Mendalawi, Mahmood D.**  
PERINATAL MORTALITY
- Al Moundhri, Mansour S.**  
BREAST NEOPLASMS (epidemiology)
- Al Mujaini, Abdullah**  
STURGE-WEBER SYNDROME
- Al Najar, Mahasen S.**  
KNEE (pathology)
- Al Najjar, Mahasen S.**  
HEMANGIOMA, CAVERNOUS, CENTRAL NERVOUS SYSTEM (epidemiology)
- Al Qzazz, Maysoon M.**  
DOXORUBICIN (pharmacology)
- Al Riyami, Arwa Z.**  
ERYTHROCYTES
- Al Riyami, Nihal**  
PREGNANCY, TRIPLET
- Al Sammak, Maha A.**  
DOXORUBICIN (pharmacology)

- Al Shafae, Mohammed**  
BLOOD GLUCOSE
- Al Shahrabally, Aamir**  
CYSTINOSIS (therapy)
- Al Sharayri, Mohammad Ghassan**  
PHARMACISTS
- Al Shehhi, Ibrahim**  
ERYTHROCYTES
- Al Shukri, Maryam**  
PREGNANCY, TRIPLET
- Al Sinani ,Sawsan**  
BLOOD GLUCOSE
- Al Turki, T Yousef Abdullah**  
CARDIOVASCULAR SYSTEM
- Al Yahyae, Said**  
BLOOD GLUCOSE
- Alali, Feras. Q.**  
PAPAVERACEAE
- Alam, M. K.**  
METALS, HEAVY
- Alam, Mumtaz**  
CATARACT EXTRACTION
- Alarini, Mahmoud Y.**  
HEMANGIOMA, CAVERNOUS, CENTRAL  
NERVOUS SYSTEM (epidemiology)
- Albarwani, Sulayma**  
BLOOD GLUCOSE
- Albsoul Younes, Abla**  
COUNSELING
- Alenezi, Nouf A.**  
COUNSELING
- Alhashemi, A. Hosseini**  
SULFUR  
TRACE ELEMENTS  
MERCURY
- Ali, Alia**  
DIABETES MELLITUS, TYPE 2
- Ali, Syed Sadat**  
CHILD DEVELOPMENT
- Aliabadi, Alireza**  
THIADIAZOLES (chemical synthesis)
- Aliya, Hisam**  
WATER MICROBIOLOGY
- Alj, Saghir A.**  
HEPATITIS C (epidemiology)
- Alkaabi, Juma K.**  
BEHCET SYNDROME (blood)
- Alkhodari, Abdulrahman**  
MENTHA PIPERITA
- Alkofahi ,Ahmad S.**  
PAPAVERACEAE
- Allahnawaz**  
SPLENECTOMY
- Alnnjeeli, Amal**  
MENTHA PIPERITA
- Alsalamat, Izzeddin**  
MENTHA PIPERITA
- Alwan, Alaa Fadhil**  
LEUKEMIA, LYMPHOCYTIC, CHRONIC,  
B-CELL (drug therapy)
- Alzweiri, Muhammed**  
PHENYLETHYL ALCOHOL (analogs and  
derivatives)
- Aman Ur-Rehman**  
KIDNEY NEOPLASMS (pathology)
- Amanzadeh, Amir**  
LASER THERAPY, LOW-LEVEL
- Ameer, Saima**  
NEUROMA, ACOUSTIC (diagnosis)
- Amerion, Maryam**  
NICOTINE (pharmacokinetics)
- Amin, Muhammad Joher**  
DIABETES MELLITUS, TYPE 2
- Amir, Qurat UI Aien**  
CHRONIC PERIODONTITIS
- Amiri, M.J.**  
ELAEAGNACEAE
- Amna**  
CHILD WELFARE
- Amoran, Olorunfemi Emmanuel**  
AUTOMOBILE DRIVING
- Anbu, M.**  
HYDROCARBONS, CHLORINATED
- Anil, Bhandari**  
GALACTANS
- Anjum, Fakhsheena**  
ANTINEOPLASTIC AGENTS (adverse effects)
- Ansar, Afia**  
PLACENTA DISEASES (surgery)
- Anuradha, Murugesan**  
SPERMATOZOA
- Anvari, A.**  
CAPROLACTAM (analogs and derivatives)
- Anwar, Ayesha**  
CHRONIC PERIODONTITIS

- Anwar, Khurshid**  
OTOMYCOSIS (epidemiology)
- Anwar, Muhammad Waqar Khan Saira**  
CHRONIC PERIODONTITIS
- Anwar, Naureen**  
MYOCARDIAL ISCHEMIA (blood)
- Anwer, Zonaira**  
ANTINEOPLASTIC AGENTS (adverse effects)
- Araz, Omer**  
HEMOPTYSIS
- Arbab Soleimani, N.**  
PETROLEUM
- Arica, Secil**  
MEAN PLATELET VOLUME
- Arif, Fehmina**  
NUTRITIONAL STATUS
- Arif, Qurat ul ain**  
ANTINEOPLASTIC AGENTS (adverse effects)
- Arslan, Erol**  
AMPUTATION
- Asemi, Zatollah**  
VITAMINS
- Asghari, Gholamreza**  
DIAZINON
- Asgharnia, Maryam**  
FETAL MEMBRANES, PREMATURE RUPTURE (diagnosis)
- Ashrafi Kooshk, Mohammad Reza**  
TIMOLOL (adverse effects)
- Ashrafkhani, Babak**  
FETAL MEMBRANES, PREMATURE RUPTURE (diagnosis)
- Assari, Shervin**  
DEPRESSIVE DISORDER, MAJOR COMMUNICATION
- Atique, Muhammad**  
URINARY BLADDER NEOPLASMS
- Ayatollahi, Abdul Majid**  
LAMIACEAE
- Ayatollahi, Seyyed Abdulmajid**  
CALORIC RESTRICTION  
CAFFEINE
- Aydin, Ibrahim**  
AMPUTATION
- Aydin, Yener**  
HEMOPTYSIS
- Aydir, Ahmet**  
THEOPHYLLINE (analysis)
- Ayyaz, Mahmood**  
SPLENECTOMY
- Azad, Fatemeh Fathi**  
CAULERPA (chemistry)
- Azam, Muhammad**  
URINARY BLADDER NEOPLASMS (diagnosis)
- Azeem, A.K.**  
PLANT EXTRACTS
- Aziz, Farooq**  
ADENOMA, PLEOMORPHIC (diagnosis)
- Azizi, Faezeh**  
MULTIPLEX POLYMERASE CHAIN REACTION
- Azzam, R.**  
GROUNDWATER
- Babaeian, Mohammad**  
LAMIACEAE
- Babamahmoodi, Abdolreza**  
HEALTH SERVICES RESEARCH
- Badar, Sumera**  
STUDENTS, MEDICAL
- Bafrani, Hassan Hassani**  
CRYOPRESERVATION
- Baghvand, A.**  
ELAEAGNACEAE
- Baharara, Javad**  
BREAST NEOPLASMS (genetics)
- Baier, K.**  
GROUNDWATER
- Bajwa, Mohammad**  
BIOMEDICAL TECHNOLOGY
- Bakhtiari, S.**  
METALS, HEAVY
- Baloch, Shahla**  
CESAREAN SECTION
- Baloglu, Ali**  
MEAN PLATELET VOLUME
- Banas, A.**  
IRON
- Banas, K.**  
IRON
- Barar, Jaleh**  
CAULERPA (chemistry)
- Barzegar, Mohsen**  
EICOSAPENTAENOIC ACID (chemistry)
- Barzegari, Abolfazl**  
CAULERPA (chemistry)

- Basheer, Faisal**  
BRANCHIO-OTO-RENAL SYNDROME  
(diagnosis)
- Bashir, Omar**  
URINARY BLADDER NEOPLASMS (diagnosis)
- Bashir, Usman**  
URINARY BLADDER NEOPLASMS (diagnosis)
- Bayoumi, Riad**  
BLOOD GLUCOSE
- Beeraka, Swapna Sridevi**  
THROMBASTHENIA (diagnosis)
- Behbahani, Mandana**  
FERULA  
BOSWELLIA
- Beladimoghadam, Nahid**  
STROKE (drug therapy)
- Bemanian, Mohammad Hassan**  
ASTHMA (genetics)
- Besharati Seidani, T.**  
METALS, HEAVY
- Bhat, Keshava**  
CARCINOMA, MUCOEPIDERMOID (diagnosis)
- Bibi, Anwar**  
GOITER
- Bidhendi, Gh. R Nabi**  
BIOELECTRIC ENERGY SOURCES
- Bidmeshkipour, Ali**  
TAMOXIFEN (pharmacology)
- Biglari, Alireza**  
DIABETIC NEPHROPATHIES
- Bokharaei, Hanieh**  
ASTHMA (genetics)
- Bokhari, Syeda Aisha**  
RETINAL DETACHMENT (surgery)
- Breese, M.B.H.**  
IRON
- Burney, Ikram A.**  
BREAST NEOPLASMS (epidemiology)
- Bustos Bustos, E.**  
BIOFUELS
- Butt, Farooq B.**  
HEPATITIS C (epidemiology)
- Butt, Fauzia**  
DIABETES, GESTATIONAL (diagnosis)
- Butt, Toqeer**  
ZINC (blood)
- Cabalar, Murat**  
LEPROSY
- Cakmak, Tolga**  
AMPUTATION
- Cao, Chunmei**  
NEOPLASMS
- Cardenas Mijangos, J.**  
BIOFUELS
- Cengiz, Pelln**  
KETAMINE (therapeutic use)
- Ceran, Canan**  
PEPTIC ULCER PERFORATION (therapy)
- Cetin, Mustafa**  
ASPIRIN
- Cetin, Zehra Guven**  
ASPIRIN
- Cevher, Selim**  
METABOLIC SYNDROME X
- Chae, Jung woo**  
HYPOGLYCEMIC AGENTS (pharmacokinetics)
- Chai, Qing**  
ISCHEMIC PRECONDITIONING, MYOCARDIAL
- Charehsaz, Mohammad**  
THEOPHYLLINE (analysis)
- Chellasamy, Selvaakumar**  
TUBULIN
- Chen, Keifei**  
CARCINOMA, HEPATOCELLULAR
- Chen, Tianping**  
STILL'S DISEASE, ADULT-ONSET
- Chen, Yiyi**  
HOSPITALS
- Chen, Zhibao**  
CANDIDA ALBICANS (drug effects)
- Chenari, A. Dehghan**  
METALS, HEAVY
- Chiragh, Sadia**  
CARICA
- Chowdhury M.A.Z.**  
METALS, HEAVY
- Christian, E. Odo**  
PERSEA (toxicity)
- Cicek, Betul**  
LUNCH
- Cicek, Gizem Selen**  
KETAMINE (therapeutic use)
- Cicekcioglu, Hulya**  
ASPIRIN



- Cioccoiu, C.N.**  
ELECTRONIC WASTE
- Clasadonte, M.T.**  
CYNARA SCOLYMUS
- Colesca, S.E.**  
ELECTRONIC WASTE
- Correa, Fernanda Oliveira Bello**  
ALVEOLAR BONE LOSS (diagnosis)
- Dadashzadeh, Simin**  
VERAPAMIL (pharmacokinetics)
- Dahbour, Said S.**  
HEMANGIOMA, CAVERNOUS, CENTRAL  
NERVOUS SYSTEM (epidemiology)
- Damari, Behzad**  
ALCOHOLISM (prevention and control)
- Daneshpajouhnejad, Parnaz**  
NON-ALCOHOLIC FATTY LIVER DISEASE
- Darakhshan, Sara**  
TAMOXIFEN (pharmacology)
- Darko, G.**  
METALS, HEAVY
- Dars, Saira**  
FETAL MEMBRANES, PREMATURE RUPTURE
- Darvishi, Mohammad**  
COMMUNICATION
- Date, Rohit**  
PHEOCHROMOCYTOMA (drug therapy)
- Davis, Heidi**  
ERYTHROCYTES
- Davoodi, Sayed Hossein**  
CALORIC RESTRICTION  
  
CAFFEINE
- Demirbas, Seref**  
AMPUTATION
- Demirkaya Miloglu, Fatma**  
VITAMIN K 3 (analysis)
- Deng, Xian Qing**  
THIAZOLES (chemical synthesis)
- Dezhkam, Hakime**  
SEX PRESELECTION
- Dezhkam, Iman**  
SEX PRESELECTION
- Dezhkam, Lotfollah**  
SEX PRESELECTION
- Dhaded**  
CHILD DEVELOPMENT
- Dhar, Hansa**  
CESAREAN SECTION
- Di, Wang**  
BREAST NEOPLASMS (pathology)
- Dinesh, Premavathy**  
SPERMATOZOA
- Dinesh, Puri**  
GALACTANS
- Dirbaz, Zahra**  
FETAL MEMBRANES, PREMATURE RUPTURE  
(diagnosis)
- Djadid, Navid Dinparast**  
ASTHMA (genetics)
- Djalalinia, Shirin**  
HEALTH SERVICES RESEARCH
- Doar, Hazem Ibrahim**  
SLIPPED CAPITAL FEMORAL EPIPHYSES  
(diagnosis)
- Dogan, Nurettin Ozgur**  
STROKE (mortality)
- Dong, Liu**  
CARCINOMA, NON-SMALL-CELL LUNG
- Dowlatshahi, Kamran**  
CALORIC RESTRICTION  
CAFFEINE
- Duman, Nuriye Buyukkayaci**  
SEXUAL DYSFUNCTIONS, PSYCHOLOGICAL  
(epidemiology)
- Eakin, Elizabeth**  
MOTOR ACTIVITY
- Ebadi, Ahmad**  
VASCULAR ENDOTHELIAL GROWTH FACTOR  
RECEPTOR-2 (antagonists and inhibitors)
- Ebrahimi, Fatemeh**  
ANTIPYRINE (analogs and derivatives)
- Ebrahimi, Mahmood**  
WATER
- El Elimat, Tamam**  
PAPAVERACEAE
- El Hammoui, Massine**  
FIBROMA (surgery)
- El Mallawany, Sherif**  
BONE DISEASES, METABOLIC (diet therapy)
- El Naggari, Mohamed A.**  
CYSTINOSIS (therapy)
- El Nihary, Khaled Ameen**  
ANEMIA, SICKLE CELL
- El Rashidy, Fatma H.**  
BONE DISEASES, METABOLIC (diet therapy)

- El Sabawi, Dina**  
ANTI-INFLAMMATORY AGENTS,  
NON-STEROIDAL (pharmacology)
- El Shafie, Omayma**  
BLOOD GLUCOSE  
PHEOCHROMOCYTOMA (drug therapy)
- El Shazly, Atef M.**  
BIOMPHALARIA (drug effects)
- Elnour, Ibtisam**  
CYSTINOSIS (therapy)
- Emami, Fakhrossadat**  
DIAZINON
- Emami, Sayyed Ahmad**  
ARTEMISIA (chemistry)
- Emami, Seyed Ahmad**  
SOPHORA
- Entezarmahdi,Rasool**  
LEPROSY
- Eryyruk, K.**  
ELECTROCOAGULATION
- Esfahani Monfared, Zahra**  
CARCINOMA, NON-SMALL-CELL LUNG (drug  
therapy)
- Eshun, F. Bismark**  
METALS, HEAVY
- Eslamparast, Ameneh**  
NEOPLASM PROTEINS
- Esmaeelpour, M.R. Monazzam**  
NOISE
- Esmailzadeh, Ahmad**  
VITAMINS
- Ezadkhasty, Z.**  
ELAEAGNACEAE
- Fadaei, E.**  
ELAEAGNACEAE
- Fakhar, Faiza**  
ANTINEOPLASTIC AGENTS (adverse effects)
- Fakhruddin, A.N.M.**  
METALS, HEAVY
- Fakhrzadeh, Hossein**  
DYSLIPIDEMIAS (epidemiology)
- Fan, Peng Cheng**  
CYSTINE (analogs and derivatives)
- Fan, Xi zhen**  
DOXYCYCLINE (pharmacology)
- Fang, Nianbai**  
ALISMATACEAE
- Fang, Shaokuan**  
POLYNEUROPATHIES (diagnosis)
- Farah, Waleed M.**  
PROSTATE (pathology)
- Farahabadi, Samaneh Sadat Hosseini**  
SOMITES
- Farasat, Tasnim**  
MYOCARDIAL ISCHEMIA (blood)
- Fardous, Z.**  
METALS, HEAVY
- Farjadian, Shirin**  
RECEPTORS, N-METHYL-D-ASPARTATE  
(antagonists and inhibitors)
- Farjam, Mojtaba**  
RECEPTORS, N-METHYL-D-ASPARTATE  
(antagonists and inhibitors)
- Farooq, Fariha**  
HEPATITIS B (prevention and control)
- Faruqui, Zia Sulman**  
URINARY BLADDER NEOPLASMS (diagnosis)
- Faryabi, Reza**  
MALARIA (prevention and control)
- Fathima, A.**  
PSEUDOEPHEDRINE (analysis)
- Fatmi, Zafar**  
ACCIDENTS, TRAFFIC (prevention and control)
- Fattahian, Khadijeh**  
FERULA
- Fc, Nwodo Okwesili**  
PERSEA (toxicity)
- Fekri, Majeda A.**  
BREAST NEOPLASMS (epidemiology)
- Feng, Jiachun**  
POLYNEUROPATHIES (diagnosis)
- Firdous, Samar**  
CORONARY ARTERY DISEASE
- Foroushani, Abbas Rahimi**  
LEPROSY
- Foroutan, Maryam**  
DIABETIC NEPHROPATHIES
- Fram, K.**  
HYSTERECTOMY
- Furrukh, Muhammad,**  
BREAST NEOPLASMS (epidemiology)
- Gadara, Sahar R.**  
BIOMPHALARIA (drug effects)
- Ganesh, Anuradha**  
STURGE-WEBER SYNDROME

- Ganesh, Lakshmanan**  
SPERMATOZOA
- Ganesh, Mohanraj Karthik**  
SPERMATOZOA
- Gao, Jun**  
HEART DEFECTS, CONGENITAL
- Gao, Wenyuan**  
CITRUS
- Gargari, Soraya Saleh**  
MULTIPLEX POLYMERASE CHAIN REACTION
- Geramizadeh, Bita**  
RECEPTORS, N-METHYL-D-ASPARTATE  
(antagonists and inhibitors)
- Ghadaksazzadeh, M.**  
MERCURY
- Ghaedi, Kamran**  
SOMITES
- Ghahremani, Leila**  
MALARIA (prevention and control)
- Ghahremani, Mohammad Hossein**  
NEOPLASM PROTEINS
- Ghanbari, Ali**  
TAMOXIFEN (pharmacology)
- Ghanei, Mostafa**  
HEALTH SERVICES RESEARCH
- Ghani, Fazal**  
METAL CERAMIC ALLOYS
- Ghannadi, Alireza**  
FERULA
- Ghareeb, Doaa A.**  
BONE DISEASES, METABOLIC (diet therapy)
- Ghasemi, Mojdeh**  
PREGNANCY, ECTOPIC (diagnosis)
- Ghasemi, Moosa**  
TIMOLOL (adverse effects)
- Gholami, kheirollah**  
MYOCARDIAL INFARCTION (drug therapy)
- Gholamian, Masoud**  
NON-ALCOHOLIC FATTY LIVER DISEASE
- Gholizadeh, Mostafa**  
WATER
- Godinez-MoraTovar, L.A.**  
BIOFUELS
- Gogus, Nermin**  
KETAMINE (therapeutic use)
- Gohar, Ahmed A.**  
BIOMPHALARIA (drug effects)
- Gohar, Muhammad Shahid**  
OTOMYCOSIS (epidemiology)
- Gokcinar, Derya**  
KETAMINE (therapeutic use)
- Gokduman, Ayse**  
CESAREAN SECTION
- Golzari, Samad EJ**  
MASKS
- Gomarian, Mahdi**  
PANCREATITIS
- Gong, Guo Hua**  
THIAZOLES (chemical synthesis)
- Gonzalez Lopez, J.**  
CARBONATES
- Gonzalez Martinez, A.**  
CARBONATES
- Gorguner, Ali Metin**  
HEMOPTYSIS
- Goudar, Shivprasad**  
CHILD DEVELOPMENT
- Gowri, Vaidyanathan**  
PREGNANCY, TRIPLET
- Gravell, David**  
BEHCET SYNDROME (blood)
- Grzechulska Damszel, J.**  
WATER (chemistry)
- Grzeskowiak, M.**  
WATER (chemistry)
- Guan, S.P.**  
WASTE DISPOSAL FACILITIES
- Guclu, Serkan**  
CESAREAN SECTION
- Gumus, Haluk**  
STROKE (mortality)
- Gun, Ismet**  
PRE-ECLAMPSIA (blood)
- Guo, Xingjie**  
ADRENERGIC BETA-ANTAGONISTS
- Gupta, Sharat**  
HEARING LOSS, NOISE-INDUCED
- Gur, Esra Bahar**  
CESAREAN SECTION
- Gurbay, Aylin**  
THEOPHYLLINE (analysis)
- Habibi, Laleh**  
LASER THERAPY, LOW-LEVEL

**Haddabi, Rahma**  
PREGNANCY, TRIPLET

**Haddadi, Mehdi**  
WATER

**Hadian, Zahra**  
EICOSAPENTAENOIC ACID (chemistry)

**Hadidi, Fadi A.**  
KNEE (pathology)

**Hadidy, Azmy M.**  
KNEE (pathology)  
HEMANGIOMA, CAVERNOUS, CENTRAL  
NERVOUS SYSTEM (epidemiology)

**Haeri, Azadeh**  
VERAPAMIL (pharmacokinetics)

**Hafizi, Leili**  
WATER

**Haider, Imran**  
CHEST PAIN (etiology)

**Hajimiresmaiel, Seyed Javad**  
CAFFEINE

**Hakuz, Neris Musa**  
PHARMACISTS

**Hamadeh, Randah R.**  
BREAST NEOPLASMS (epidemiology)

**Hamdan, Imad**  
ANTI-INFLAMMATORY AGENTS,  
NON-STEROIDAL (pharmacology)

**Hamdan, Mahmoud A.**  
DENTAL CARIES (epidemiology)

**Hamdaoui, S.**  
TANNINS

**Hamdi, Ilham**  
CESAREAN SECTION

**Hamdi, N.**  
TANNINS

**Hamed, Amin T.**  
DIABETIC NEPHROPATHIES

**Hamid, Rana S.**  
STURGE-WEBER SYNDROME

**Hamoush, Zaynab**  
PREGNANCY, ECTOPIC (diagnosis)

**Han, Jin**  
HEPATITIS C

**Han, Sanghoon**  
VENA CAVA, INFERIOR (pathology)

**Hao, Mo**  
CRITICAL ILLNESS

**Hargun, Lakhani Das**  
RETINAL DETACHMENT

**Hasanzadeh, Mohammad**  
CARBAZOLES (analysis)

**Hashemi, Leila**  
PREGNANCY, ECTOPIC (diagnosis)

**Hashemi, Mehrdad**  
ENDOMETRIUM (drug effects)

**Hashemipour, Maryam A.**  
EVIDENCE-BASED DENTISTRY

**Hashmi, Zahid Yaseen**  
STUDENTS, MEDICAL

**Hassan, Mohammed O.**  
BLOOD GLUCOSE

**Hassani, Zahra**  
MASKS

**Hassanian Moghaddam, Hossein**  
ALCOHOLISM (prevention and control)

**Hassawi, Bashar A.J.**  
ENDOMETRIAL NEOPLASMS (genetics)

**Hasweh, Reem N.**  
KNEE (pathology)

**Hatami, Tayyebe**  
ARTEMISIA (chemistry)

**Heidari, Mohammad Mehdi**  
VARICOCELE

**Heidarian, Neda**  
THIADIAZOLES (chemical synthesis)

**Hejabi, A.Taghinia**  
SULFUR  
MERCURY

**Hentour, Siham**  
FIBROMA (surgery)

**Heo, Dahee**  
VENA CAVA, INFERIOR (pathology)

**Hisam, Aliya**  
FOLIC ACID DEFICIENCY

**Hossain, M.S.**  
METALS, HEAVY

**Hosseini, Golkoo**  
WATER

**Hou, Yi**  
CYTOCHROME P-450 CYP2C9

**Hu, P.**  
POLYCYCLIC HYDROCARBONS, AROMATIC

**Hu, X.**  
ENTEROBACTERIACEAE

- Huang, B.**  
POLYCYCLIC HYDROCARBONS, AROMATIC
- Huang, Xiaofei**  
ALISMATACEAE
- Hui, Fens**  
CARCINOMA, NON-SMALL-CELL LUNG
- Hussain, Arif**  
NATRIURETIC PEPTIDE, BRAIN (diagnostic use)
- Hussain, Ibrahim B.**  
MYCOSES (diagnosis)
- Hussain, Warda**  
ZINC (blood)
- Ilce, Huri Tilla**  
PEPTIC ULCER PERFORATION (therapy)
- Ilce, Zekeriya**  
PEPTIC ULCER PERFORATION (therapy)
- Inanc, Neriman**  
LUNCH
- Induri, Madhusudhanareddy**  
PSEUDOEPHEDRINE (analysis)
- Ingrao, C.**  
CYNARA SCOLYMUS
- Iqbal, Farrukh**  
DIABETES MELLITUS, TYPE 2
- Iqbal, Iram**  
BETA-THALASSEMIA
- Iqbal, Mustafa**  
CATARACT EXTRACTION
- Iqbal, Zafar**  
DIABETES MELLITUS, TYPE 2
- Irfan, Muhammad**  
DRUG PRESCRIPTIONS
- Irfan, Uma Maheswari**  
DRUG PRESCRIPTIONS
- Isik, Serhat**  
ASPIRIN
- Jaafari, Morteza**  
TIMOLOL (adverse effects)
- Jafrı M., Sana**  
CHOLANGIOPANCREATOGRAPHY,  
ENDOSCOPIC RETROGRADE
- Jaju, Deepali**  
BLOOD GLUCOSE
- Jalali, Mehdi**  
NICOTINE (pharmacokinetics)
- Jalil, Jawad**  
BRANCHIO-OTO-RENAL SYNDROME  
(diagnosis)
- Jalili, Javad**  
NON-ALCOHOLIC FATTY LIVER DISEASE
- Jalilzadeh Yengejeh, R.**  
PETROLEUM
- Jamal, Nighat**  
URINARY BLADDER NEOPLASMS
- Jamal, Shahid**  
URINARY BLADDER NEOPLASMS
- Jardani, Amina**  
MYCOSES (diagnosis)
- Javadi, Kh.**  
BIOELECTRIC ENERGY SOURCES
- Javadian, Bahareh**  
VERAPAMIL (pharmacokinetics)
- Javanmard, Shaghayegh Haghjooy**  
YOGA
- Javed, Fawad**  
ALVEOLAR BONE LOSS (diagnosis)
- Javed, Irfan**  
SPLENECTOMY
- Javedan, Gholamali**  
CALORIC RESTRICTION  
CAFFEINE
- Jeminusi, Olubunmi**  
AUTOMOBILE DRIVING
- Jeyakumar, T.**  
HYDROCARBONS, CHLORINATED
- Ji, Hong**  
BREAST NEOPLASMS (pathology)
- Jia, Zheng Ping**  
CYSTINE (analogs and derivatives)
- Jiang, Guan**  
POLYARTERITIS NODOSA
- Jiang, Liwen**  
CRITICAL ILLNESS
- Jiang, Shan**  
VASCULAR ENDOTHELIAL GROWTH FACTOR  
A (blood)
- Jiang, Xinmei**  
POLYNEUROPATHIES (diagnosis)
- Jiang, Zhen**  
ADRENERGIC BETA-ANTAGONISTS
- Jing, Lin Lin**  
CYSTINE (analogs and derivatives)
- Jooma, Rashid**  
SOCIAL DETERMINANTS OF HEALTH

**Jouyban, Abolghasem**  
CARBAZOLES (analysis)

**Jung, Sang hoon**  
HYPOGLYCEMIC AGENTS (pharmacokinetics)

**Kabiri, El Hassane**  
FIBROMA (surgery)

**Kadioglu, Yucel**  
VITAMIN K 3 (analysis)

**Kadir, Ehsan**  
WATER MICROBIOLOGY

**Kafi, Hamidreza**  
STROKE (drug therapy)

**Kajbafzaderf, Abdolmohammad**  
ENDOMETRIUM (drug effects)

**Kalaierasi, I.**  
HYDROCARBONS, CHLORINATED

**Kalsoom, Rahat**  
ADENOMA, PLEOMORPHIC (diagnosis)

**Kamalnejad, Mohammad**  
LAMIACEAE

**Kamani, Lubna**  
CHOLANGIOPANCREATOGRAPHY,  
ENDOSCOPIC RETROGRADE

**Kamil, Zeeshan**  
RETINAL DETACHMENT (surgery)

**Kanwal, Noreen**  
NEUROMA, ACOUSTIC (diagnosis)

**Karabeyoglu, Isil**  
KETAMINE (therapeutic use)

**Karadsheh, Naif S.**  
ANTIOXIDANTS

**Karakas, Ahmet**  
AMPUTATION

**Karbalaie, Khadijeh**  
SOMITES

**Karbassi, A.R.**  
WATER

**Karien, Ghada A.**  
DENTAL CARIES (epidemiology)

**Karimi, Mohammad**  
WATER

**Karimi, Shirin**  
CARCINOMA, NON-SMALL-CELL LUNG (drug  
therapy)

**Kasem, Abdul Ghafoor**  
ANEMIA, SICKLE CELL

**Kashani, Iraj Ragerdi**  
LASER THERAPY, LOW-LEVEL

**Kausar, Samina**  
CARICA

**Kaveh, Mohammad Hossein**  
MALARIA (prevention and control)

**Kayiklik, Asim**  
METABOLIC SYNDROME X

**Kaynar, Hasan**  
HEMOPTYSIS

**Kazemzadeh, Mahdieh**  
ORYZA SATIVA

**Kazi, Roshan Ara**  
FETAL MEMBRANES, PREMATURE RUPTURE

**Keskek, Sakir Ozgur**  
METABOLIC SYNDROME X

**Keskin, Ugur**  
PRE-ECLAMPSIA (blood)

**Khadim, Muhammad Tahir**  
URINARY BLADDER NEOPLASMS

**Khadivi, S.**  
PETROLEUM

**Khalid, Sara**  
VITAMIN A (pharmacology)

**Khalil, Enam**  
ANTI-INFLAMMATORY AGENTS,  
NON-STEROIDAL (pharmacology)

**Khan, Adeel Ahmed**  
ACCIDENTS, TRAFFIC (prevention and control)

**Khan, Ahsan**  
SPLENECTOMY

**Khan, Durdana**  
PREGNANCY, TRIPLET

**Khan, Junaid Sarfraz**  
EDUCATIONAL MEASUREMENT

**Khan, Khalid Mahmood**  
MOUTH NEOPLASMS

**Khan, Saba**  
PLACENTA DISEASES (surgery)

**Khan, Saima Rubab**  
MOUTH NEOPLASMS

**Khan, Sana Qayyum**  
ZINC (blood)

**Khan, Sher Akbar**  
CATARACT EXTRACTION

**Khazada, Mahtab Alam**  
RETINAL DETACHMENT

**Khaskheli, Meharun Nissa**  
CESAREAN SECTION

**Khatami, Mehri**  
VARICOCELE

**Khatib, Faisal A.**  
ANTIOXIDANTS

**Khazaeipour, Zahra**  
MYOCARDIAL INFARCTION (drug therapy)

**Khdair, Ayman**  
ANTI-INFLAMMATORY AGENTS,  
NON-STEROIDAL (pharmacology)

**Khodadad, Kian**  
CARCINOMA, NON-SMALL-CELL LUNG (drug  
therapy)

**Khodarahmi, Reza**  
TIMOLOL (adverse effects)

**khoo, Nooshafarin Kazemi**  
LASER THERAPY, LOW-LEVEL

**Khorasani, N.**  
WATER

**Khoshbaten, Manouchehr**  
NON-ALCOHOLIC FATTY LIVER DISEASE

**Khosravi, Adnan**  
CARCINOMA, NON-SMALL-CELL LUNG (drug  
therapy)

**Khursheed, Tayyeba**  
DRUG PRESCRIPTIONS

**Kiani, M. Ali**  
HERNIA, VENTRAL (surgery)

**Kirim, Sinan**  
METABOLIC SYNDROME X

**Kivani, Hossein**  
LIVER CIRRHOSIS (congenital)

**Kiziltunc, Emrullah**  
ASPIRIN

**Kocak, Necmettin**  
PRE-ECLAMPSIA (blood)

**Kolaparthi, Venkata Suneel Kumar**  
THROMBASTHENIA (diagnosis)

**Kouчек, Mehran**  
STROKE (drug therapy)

**Koul, Roshan**  
STURGE-WEBER SYNDROME

**Kruger, Marta Silveira da Mota**  
ALVEOLAR BONE LOSS (diagnosis)

**Kubica, B.**  
IRON

**Kumar, Avnish**  
HEARING LOSS, NOISE-INDUCED

**Kumar, B. S. Sanath**  
PHEOCHROMOCYTOMA (drug therapy)

**Kumar, R.**  
HYDROCARBONS, CHLORINATED

**Kumar, Raj**  
CHOLANGIOPANCREATOGRAPHY,  
ENDOSCOPIC RETROGRADE

**Kurt, Raziye Keskin**  
MEAN PLATELET VOLUME

**Kurtul, Alparslan**  
ASPIRIN

**Kwiatek, W.M.**  
IRON

**Kwon, Kwang il**  
HYPOGLYCEMIC AGENTS (pharmacokinetics)

**Laghari, Abdul Aziz**  
CHOLECYSTECTOMY, LAPAROSCOPIC

**Lai, Yongqing**  
EPIDIDYMITIS

**Lak, R.**  
METALS, HEAVY

**Lakhtakia, Ritu**  
BREAST NEOPLASMS (history)

**Lakshmi, Nagella Venkata**  
SPERMATOOZA

**Lal, Karmoon**  
THUMB (abnormalities)

**Lameei, Abolfath**  
LEPROSY

**Larijani, Bagher**  
DYSLIPIDEMIAS (epidemiology)

**Late, A.M.**  
SOLID WASTE

**Latif, Waqas**  
VITAMIN A (pharmacology)

**Li, Bo**  
CARCINOMA, HEPATOCELLULAR

**Li, Chengyue**  
CRITICAL ILLNESS

**Li, Fang**  
ADRENERGIC BETA-ANTAGONISTS

**Li, Hongyu**  
CARCINOMA, HEPATOCELLULAR

**Li, J.**  
ENTEROBACTERIACEAE

**Li, Lei**  
CANDIDA ALBICANS (drug effects)

- Li, Peiling**  
HEART DEFECTS, CONGENITAL
- Li, Qinghuai**  
BREAST NEOPLASMS (pathology)
- Li, Shujun**  
HEART DEFECTS, CONGENITAL
- Li, X.M.**  
POLYCYCLIC HYDROCARBONS, AROMATIC
- Li, Xinran**  
CANDIDA ALBICANS (drug effects)
- Li, Yinwei**  
STILL'S DISEASE, ADULT-ONSET
- Li, Zang**  
CARCINOMA, NON-SMALL-CELL LUNG
- Liang, Junchao**  
CANDIDA ALBICANS (drug effects)
- Lin, M.**  
ENTEROBACTERIACEAE
- Lisha J., John**  
GASTROINTESTINAL AGENTS
- Liu, Changxiao**  
CITRUS
- Liu, Fei**  
CARCINOMA, HEPATOCELLULAR
- Liu, Feng Qun**  
HEPATITIS C
- Liu, Jin**  
ISCHEMIC PRECONDITIONING, MYOCARDIAL
- Liu, Lihui**  
CANDIDA ALBICANS (drug effects)
- Liu, Pengcheng**  
CRITICAL ILLNESS
- Liu, Sen**  
GASTROINTESTINAL HEMORRHAGE (surgery)
- Liu, Wen Lou**  
POLYARTERITIS NODOSA
- Liu, X.**  
ENTEROBACTERIACEAE
- Liu, Y.**  
ENTEROBACTERIACEAE
- Liu, Yan Qun**  
POLYARTERITIS NODOSA
- Liu, Yu**  
NEOPLASMS
- Liu, Yunchu**  
EPIDIDYMITIS
- Liu, Zhen**  
CITRUS
- Lo Giudice, A.**  
CYNARA SCOLYMUS
- Lu, Kungang**  
ALISMACEAE
- Lutfi, Irfan Amjad**  
NATRIURETIC PEPTIDE, BRAIN (diagnostic use)
- Ma, Hui Ping**  
CYSTINE (analogues and derivatives)
- Ma, Jun**  
CYSTINE (analogues and derivatives)
- Maatooq, Galal T.**  
BIOMPHALARIA (drug effects)
- Mabry, Ruth**  
MOTOR ACTIVITY
- Mahafza, Tareq**  
GRANULOMA, GIANT CELL (diagnosis)
- Mahboubi, Arash**  
LAMIACEAE
- Mahdi, Farzana**  
VITAMIN E
- Mahmood Ur Rahman**  
WATER MICROBIOLOGY
- Mahmood, Shahid**  
CHOLANGIOPANCREATOGRAPHY,  
ENDOSCOPIC RETROGRADE
- Mahmoodi, N.O.**  
METALS, HEAVY
- Mahmoodpoor, Ata**  
MASKS
- Majdzadeh, Reza**  
LEPROSY
- Majeed, Ammar Fadhil**  
LEUKEMIA, LYMPHOCYTIC, CHRONIC,  
B-CELL (drug therapy)
- Majeed, Nadia**  
NIGELLA SATIVA
- Maktabi, P.**  
PETROLEUM
- Mal, Washoo**  
RETINAL DETACHMENT (surgery)
- Mala, Ashfaq**  
NUTRITIONAL STATUS
- Malekafzali, Hossein**  
HEALTH SERVICES RESEARCH
- Maleki, Akram**  
DIABETIC NEPHROPATHIES



- Maliakal, Joseph**  
PROSTATIC HYPERPLASIA (diagnosis)
- Malik, Arif**  
MOUTH NEOPLASMS
- Malik, Awais Amjad**  
SPLENECTOMY
- Malik, Safia**  
FETAL MEMBRANES, PREMATURE RUPTURE
- Malik, Sajid**  
THUMB (abnormalities)
- Malik, Tooba**  
PLACENTA DISEASES (surgery)
- Mallick, Neelam**  
ANTINEOPLASTIC AGENTS (adverse effects)
- Mani, Renjith**  
STURGE-WEBER SYNDROME
- Manne, Rakesh Kumar**  
THROMBASTHENIA (diagnosis)
- Manohar, Vidya**  
CARCINOMA, MUCOEPIDERMOID (diagnosis)
- Manriquez Rocha, J.**  
BIOFUELS
- Mansouri, Kamran**  
TAMOXIFEN (pharmacology)
- Manzoor, Rabia**  
CHILD WELFARE
- Marandi, Seyed Mohamad**  
YOGA
- Martin Ramos, D.**  
CARBONATES
- Martins, Thiago Marchi**  
ALVEOLAR BONE LOSS (diagnosis)
- Mashhadi, Syed Fawad**  
FOLIC ACID DEFICIENCY
- Masood, Sumaira**  
WATER MICROBIOLOGY
- Matti, Bassam Francis**  
LEUKEMIA, LYMPHOCYTIC, CHRONIC,  
B-CELL (drug therapy)
- Mbohwa, C.**  
CYNARA SCOLYMUS
- Medina Herrera, M.**  
BIOFUELS
- Mehdi, M. Zain**  
KIDNEY NEOPLASMS (pathology)
- Mehmood, Rana Qaiser**  
KIDNEY NEOPLASMS (pathology)
- Mehnaz, Aisha**  
NUTRITIONAL STATUS
- Mehrabani, G.**  
PATIENTS
- Mehrdadi, N.**  
BIOELECTRIC ENERGY SOURCES
- Mehryar, Hamidreza**  
MASKS
- Meibodi, Neda Emami**  
WATER
- Mellati, Ali Awsat**  
DIABETIC NEPHROPATHIES
- Memaryan, Nadereh**  
ALCOHOLISM (prevention and control)
- Memon, Amir Iqbal**  
CHOLECYSTECTOMY, LAPAROSCOPIC
- Memon, Shazia**  
CHILD WELFARE
- Menon, Varna**  
PROSTATIC HYPERPLASIA (diagnosis)
- Meral, Mehmet**  
HEMOPTYSIS
- Mhaidat, Nizar M.**  
PAPAVERACEAE
- Mihaila, Romeo Gabriel**  
CARDIO-RENAL SYNDROME (diagnosis)
- Milostic Srb, Andrea**  
PREGNANCY, ECTOPIC (therapy)
- Minaiyan, Mohsen**  
PANCREATITIS
- Miraghaee, Sayyed Shahram**  
ARTEMISIA (chemistry)
- Mirblouk, Fariba**  
FETAL MEMBRANES, PREMATURE RUPTURE  
(diagnosis)
- Miri, Ramin**  
VASCULAR ENDOTHELIAL GROWTH FACTOR  
RECEPTOR-2 (antagonists and inhibitors)
- Mirvakili, H.S.**  
POLYCYCLIC HYDROCARBONS, AROMATIC
- Mittal, Shallu**  
HEARING LOSS, NOISE-INDUCED
- Moaref, S.**  
TRACE ELEMENTS
- Moazen, Babak**  
COMMUNICATION
- Moezzi, Fahime**  
VARICOCELE

- Moghimi, Hamid Reza**  
EICOSAPENTAENOIC ACID (chemistry)
- Mohagheghi, Abbas**  
MYOCARDIAL INFARCTION (drug therapy)
- Mohamadnejad, Mehdi**  
LIVER CIRRHOSIS (congenital)
- Mohammadi Farani, Ahmad**  
THIADIAZOLES (chemical synthesis)
- Mohammadi, Ebrahim**  
ANTIPYRINE (analog and derivatives)
- Mohammed, Sudheer M.M.**  
TUBULIN
- Mohseni Bandpei, Anoushiravan**  
CAFFEINE
- Mojarrab, Mahdi**  
ARTEMISIA (chemistry)
- Mojtahedzadeh, Mojtaba**  
MYOCARDIAL INFARCTION (drug therapy)
- Monavari, S.M.**  
WATER
- Montoya Herrera, L.**  
BIOFUELS
- Moon, Jaecheol**  
VENA CAVA, INFERIOR (pathology)
- Moradi, R.**  
SULFUR
- Morawski, A.W**  
WATER (chemistry)
- Mosaddegh, Mohammad Hossein**  
DIAZINON
- Moser, H.O.**  
IRON
- Mostafavi Toroghi, Hesam**  
WATER
- Mostafavi, Ehsan**  
LASER THERAPY, LOW-LEVEL
- Motaez, Mahsa**  
SOPHORA
- Mousa, Emad E.**  
PROSTATIC HYPERPLASIA (diagnosis)
- Mousavi, Marzieh**  
BREAST NEOPLASMS (genetics)
- Mousavi, Sarah**  
MYOCARDIAL INFARCTION (drug therapy)
- Mousavi, Seyed Hadi**  
SOPHORA
- Movahhedini, Nasrin**  
CAULERPA (chemistry)
- Mrcela, Milanka**  
PREGNANCY, ECTOPIC (therapy)
- Mula Abed, Waad Allah S.**  
GLOMERULAR FILTRATION RATE
- Mule, M. B.**  
SOLID WASTE
- Mumtaz, Asim**  
ZINC (blood)
- Mungen, Ercument**  
PRE-ECLAMPSIA (blood)
- Munnawar, Uzma**  
NUTRITIONAL STATUS
- Murshidi, Mujalli M.**  
PROSTATE (pathology)
- Musaiger, Abdulrahman O.**  
OVERWEIGHT (epidemiology)
- Musarrat Ul-Hasnain**  
STUDENTS, MEDICAL
- Mushtaq, Robina**  
GOITER
- Nabavi, Mohammad**  
ASTHMA (genetics)
- Nabolsi, Manar**  
PRESSURE ULCER (epidemiology)
- Naddaf, Ahmad**  
MENTHA PIPERITA
- Naeini, Zohreh Khodayari**  
CRYOPRESERVATION
- Nafees, Muhammad**  
HEPATITIS C (epidemiology)
- Nagi, A.H.**  
KIDNEY NEOPLASMS (pathology)
- Naieni, Kourosh Holakouie**  
LEPROSY
- Naini, Niloufar Safavi**  
MULTIPLEX POLYMERASE CHAIN REACTION
- Najam Uddin**  
URINARY BLADDER NEOPLASMS (diagnosis)
- Naji Esfahani, Hajar**  
YOGA
- Naji, Alaadin Sahham**  
LEUKEMIA, LYMPHOCYTIC, CHRONIC, B-CELL (drug therapy)
- Najjar, Husam Walid**  
SLIPPED CAPITAL FEMORAL EPIPHYSES (diagnosis)

- Naqvi, Syeda Farwa**  
THUMB (abnormalities)
- Narimisa, P.**  
WATER
- Naseem, Nadia**  
KIDNEY NEOPLASMS (pathology)
- Naseer, Muhammad Imran**  
MOUTH NEOPLASMS
- Naseer, Uzma**  
VITAMIN A (pharmacology)
- Nasehi, Mahshid**  
LEPROSY
- Nasher, Saeed Thabet**  
ANEMIA, SICKLE CELL
- Nasir, S. M.**  
NEUROMA, ACOUSTIC (diagnosis)
- Nasiripour, Somayyeh**  
MYOCARDIAL INFARCTION (drug therapy)
- Nasr Esfahani, Mohammad Hossein**  
SOMITES
- Natarajan, Kannan**  
THROMBASTHENIA (diagnosis)
- Navabi, Nader**  
EVIDENCE-BASED DENTISTRY
- Nayar, Madhavan**  
MYCOSES (diagnosis)
- Naz, Shagufta**  
MYOCARDIAL ISCHEMIA (blood)
- Nazemiyeh, Hossein**  
CAULERPA (chemistry)
- Neligan, Maurice**  
ARTHROPLASTY, REPLACEMENT, HIP
- Nematollahi, Shahrzad**  
ORYZA SATIVA
- Ni, Liangchao**  
EPIDIDYMITIS
- Nikbakht, Mohammad Reza**  
TIMOLOL (adverse effects)
- Nikfarjam, Ali**  
ALCOHOLISM (prevention and control)
- Nikravesht, Mohammad Reza**  
NICOTINE (pharmacokinetics)
- Nikseresht, Ali Reza**  
RECEPTORS, N-METHYL-D-ASPARTATE  
(antagonists and inhibitors)
- Nikzad, Hossein**  
CRYOPRESERVATION
- Nile, Shivraj Hariram**  
PLANTS, MEDICINAL
- Nimre, Eman A.**  
CESAREAN SECTION
- Njadat, Rami M.**  
PAPAVERACEAE
- Nollain, Karin**  
PHEOCHROMOCYTOMA (drug therapy)
- Noori, Atefeh**  
COMMUNICATION
- Noorpoor, A.R.**  
CAPROLACTAM (analogues and derivatives)
- Nourieh, Zeinab**  
ORYZA SATIVA
- Ogutveren, U.Bakir**  
ELECTROCOAGULATION
- Okechukwu Pc, Ugwu**  
PERSEA (toxicity)
- Oktar, Ayla Culha**  
LEPROSY
- Omrani, Mir Davood**  
MULTIPLEX POLYMERASE CHAIN REACTION
- Omrani, Sara**  
MULTIPLEX POLYMERASE CHAIN REACTION
- Ongan, Dilek**  
LUNCH
- Onyero, Emmanuel O.**  
HEARING AIDS
- Orji, Foster Tochukwu**  
HEARING AIDS
- Ornek, Ender**  
ASPIRIN
- Ortoglu, Gulay**  
METABOLIC SYNDROME X
- Otitoloju, A.A.**  
CATFISHES
- Owen, Neville**  
MOTOR ACTIVITY
- Owlia, Parviz**  
HEALTH SERVICES RESEARCH
- Ozcan, Sedat**  
ATRIAL FIBRILLATION
- Ozdamar, Ozkan**  
PRE-ECLAMPSIA (blood)
- Padmini D., Devi**  
GASTROINTESTINAL AGENTS

- Pan, X.J.J.**  
POLYCYCLIC HYDROCARBONS, AROMATIC
- Pan, Xiaofeng**  
CYTOCHROME P-450 CYP2C9
- Pan, Ying**  
VASCULAR ENDOTHELIAL GROWTH FACTOR A (blood)
- Panahi, Jafar Rahimi**  
MASKS
- Pandey, Bhavna**  
CARCINOMA, MUCOEPIDERMOID (diagnosis)
- Panjehshahin, Mohammad Reza**  
RECEPTORS, N-METHYL-D-ASPARTATE (antagonists and inhibitors)
- Parivar, Kazem**  
ENDOMETRIUM (drug effects)
- Park, Se Won**  
PLANTS, MEDICINAL
- Parker, E, Joshua**  
PERSEA (toxicity)
- Pathare, Anil**  
BEHCET SYNDROME (blood)
- Patidar, Madhvika**  
CARCINOMA, MUCOEPIDERMOID (diagnosis)
- Patil, Rajendra**  
THROMBASTHENIA (diagnosis)
- Paul, George**  
MYCOSES (diagnosis)
- Pazoki Toroudi, Hamid Reza**  
CALORIC RESTRICTION
- Pazoki Toroudi, Hamidreza**  
CAFFEINE
- Peng, Min**  
ALISMATACEAE
- Peykari, Niloofar**  
HEALTH SERVICES RESEARCH
- Ping fa, Li**  
CARCINOMA, NON-SMALL-CELL LUNG
- Popescu, M.L.**  
ELECTRONIC WASTE
- Pourjafarian, V.**  
PETROLEUM
- Pourmonajem, Sepideh**  
EVIDENCE-BASED DENTISTRY
- Prakash, Seppan**  
SPERMATOZOA
- Prasad Y. Rajendra**  
PSEUDOEPHEDRINE (analysis)
- Prathi, Venkata Sarath**  
THROMBASTHENIA (diagnosis)
- Prithiviraj, Elumalai**  
SPERMATOZOA
- Przepiorski, J.**  
WATER (chemistry)
- Qadir, S. Imran**  
KIDNEY NEOPLASMS (pathology)
- Qatawneh, Ayman**  
UTERINE PROLAPSE (surgery)
- Qazi, Mahmood Husain**  
MOUTH NEOPLASMS
- Qin, Haixia**  
VASCULAR ENDOTHELIAL GROWTH FACTOR A (blood)
- Qiu, Xiangjun**  
CYTOCHROME P-450 CYP2C9
- Qorbani, Mostafa**  
DYSLIPIDEMIAS (epidemiology)
- Quan, Zhe Shan**  
THIAZOLES (chemical synthesis)
- Qureshi, Hamid Javed**  
CHRONIC PERIODONTITIS
- Qureshi, Jawaid Naeem**  
CHOLECYSTECTOMY, LAPAROSCOPIC
- Qureshi, Tabinda Naz**  
MUNCHAUSEN SYNDROME BY PROXY (diagnosis)
- Rabbani, Malik A.**  
GLOMERULAR FILTRATION RATE
- Rabiee, Farzaneh**  
SOMITES
- Radfar, Mania**  
MYOCARDIAL INFARCTION (drug therapy)
- Rahbarghazi, Reza**  
ENDOMETRIUM (drug effects)
- Rai, Krishan**  
NUTRITIONAL STATUS
- Raider, Abida**  
HEPATITIS B (prevention and control)
- Raj, Rakesh**  
NUTRITIONAL STATUS
- Rajab, Lamis D.**  
DENTAL CARIES (epidemiology)
- Rajabibazl, Masoumeh**  
MULTIPLEX POLYMERASE CHAIN REACTION
- Rajavel, A.**  
HYDROCARBONS, CHLORINATED

- Raju M., Bhagavan**  
PSEUDOEPHEDRINE (analysis)
- Ramazani, Ali**  
DIABETIC NEPHROPATHIES
- Rambabu, Sharma**  
GALACTANS
- Ramzan, Musarat**  
GOITER
- Ranawat, M.S.**  
GALACTANS
- Ranjbar, P.**  
PETROLEUM POLLUTION
- Ranjzad, Parisa**  
DIABETIC NEPHROPATHIES
- Rasheed, Arun**  
PLANT EXTRACTS
- Rasool, Mahmood**  
MOUTH NEOPLASMS
- Rathi, Bhawna**  
CESAREAN SECTION
- Raz, Abbasali**  
ASTHMA (genetics)
- Raza, Syed T.**  
VITAMIN E
- Raza, Usman Ahmad**  
DRUG PRESCRIPTIONS
- Razzaghi Asl, Nima**  
VASCULAR ENDOTHELIAL GROWTH FACTOR RECEPTOR-2 (antagonists and inhibitors)
- Razzaq, Zeeshan**  
HERNIA, VENTRAL (surgery)
- Reddy, B. Sravya**  
PLANT EXTRACTS
- Ren, Jun**  
CYSTINE (analogs and derivatives)
- Ren, Yanfang**  
VASCULAR ENDOTHELIAL GROWTH FACTOR A (blood)
- Rezaei, Rita**  
PATIENTS
- Rezagholidzadeh, Neda**  
ANTIPYRINE (analogs and derivatives)
- Rezaiean, Amin**  
WATER
- Rezvandoust, J.**  
PETROLEUM POLLUTION
- Riaz, Hafiza Fizzah**  
THUMB (abnormalities)
- Rieger, Alexander**  
CRITICAL ILLNESS
- Rivadeneyra, A.**  
CARBONATES
- Rivadeneyra, M.A.**  
CARBONATES
- Rizvi, Saliha**  
VITAMIN E
- Rizvi, Syed**  
BLOOD GLUCOSE
- Rizvi, Syed Fawad**  
RETINAL DETACHMENT (surgery)
- Rodriguez Garcia, A.**  
BIOFUELS
- Rodriguez Valadez, F.J.**  
BIOFUELS
- Roja, C.**  
PLANT EXTRACTS
- Roohi, Mahera**  
ADENOMA, PLEOMORPHIC (diagnosis)
- Saadati, Roonak**  
VERAPAMIL (pharmacokinetics)
- Sabahi, Majid**  
MASKS
- Sabatinelli, Guido**  
SOCIAL DETERMINANTS OF HEALTH
- Saber, Shahlaa Fadhil**  
LEUKEMIA, LYMPHOCYTIC, CHRONIC, B-CELL (drug therapy)
- Sachdeva, Vibha**  
CESAREAN SECTION
- Sadeghizadeh, Majid**  
ENDOMETRIUM (drug effects)
- Sadighzadeh, A.**  
CAPROLACTAM (analogs and derivatives)
- Sadoughi, Farahnaz**  
ELECTRONIC PRESCRIBING
- Sadrarhami, Shohreh**  
NON-ALCOHOLIC FATTY LIVER DISEASE
- Saeed, Mohammed S.**  
ENDOMETRIAL NEOPLASMS (genetics)
- Saeid, Hakhameshi Mohammad**  
TAMOXIFEN (pharmacology)
- Safavi, Sayyed Morteza**  
ORYZA SATIVA
- Saglam, Leyla**  
HEMOPTYSIS

- Sahari, Mohammad Ali**  
EICOSAPENTAENOIC ACID (chemistry)
- Sahin, Gonul**  
THEOPHYLLINE (analysis)
- Sahin, Muslum**  
ASPIRIN
- Sahinoglu Keskek, Nedime**  
METABOLIC SYNDROME X
- Salako, Albert Adekunle**  
AUTOMOBILE DRIVING
- Salamat, Fatemeh**  
FETAL MEMBRANES, PREMATURE RUPTURE (diagnosis)
- Salamzadehr, Jamshid**  
STROKE (drug therapy)
- Salarilak, Shaker**  
MASKS
- Saleh, Mohammad Y.N.**  
PRESSURE ULCER (epidemiology)
- Saleh, S.S.**  
HYSTERECTOMY
- Salehi, Hossein**  
SOMITES
- Saler, Tayyibe**  
METABOLIC SYNDROME X
- Salvati, L.**  
FORESTS
- Samadbeik, Mahnaz**  
ELECTRONIC PRESCRIBING
- Samadi, S.**  
METALS, HEAVY
- Samara, Osama A.**  
PROSTATE (pathology)
- Samarah, Omar Q.**  
KNEE (pathology)
- Samavat, Tahereh**  
DYSLIPIDEMIAS (epidemiology)
- Samimi, Mansooreh**  
VITAMINS
- Samreen, Irum**  
FETAL MEMBRANES, PREMATURE RUPTURE
- Sanati, Hassan**  
LASER THERAPY, LOW-LEVEL
- Sangrasi, Ahmed Khan**  
CHOLECYSTECTOMY, LAPAROSCOPIC
- Sardari, Soroush**  
NEOPLASM PROTEINS
- Sawaqed, Fadi**  
HYPOSPADIAS (surgery)
- Schmitz, K.S.**  
GROUNDWATER
- Seifi, Sharare**  
CARCINOMA, NON-SMALL-CELL LUNG (drug therapy)
- Sekhavatjou, M.S.**  
SULFUR  
TRACE ELEMENTS  
NOISE  
MERCURY  
PETROLEUM
- Senadim, Songul**  
LEPROSY
- Senol, Onur**  
VITAMIN K 3 (analysis)
- Sereshti, H.**  
METALS, HEAVY
- Shadjou, Nasrin**  
CARBAZOLES (analysis)
- Shafieefar, M.**  
PETROLEUM POLLUTION
- Shafique, Mobeen**  
BRANCHIO-OTO-RENAL SYNDROME (diagnosis)
- Shah, Nusrat**  
NUTRITIONAL STATUS
- Shahabipour, Sara**  
VASCULAR ENDOTHELIAL GROWTH FACTOR RECEPTOR-2 (antagonists and inhibitors)
- Shahbaz, Tazeem**  
HEPATITIS C (epidemiology)
- Shahid, Muhammad**  
EMERGENCY MEDICINE
- Shahmoradi, Zahra**  
NON-ALCOHOLIC FATTY LIVER DISEASE
- Shahnoush, Alireza**  
FERULA
- Shahravan, Arash**  
EVIDENCE-BASED DENTISTRY
- Shahri, Nasser Mahdavi**  
NICOTINE (pharmacokinetics)
- Shahrokhbadi, Khadijeh**  
BREAST NEOPLASMS (genetics)
- Shaikh, Aamir H.**  
ARTHROPLASTY, REPLACEMENT, HIP
- Shaikh, Saleem**  
CHILD WELFARE

**Shaikh, Salma**  
CHILD WELFARE

**Shakeel, Sadia**  
ANTINEOPLASTIC AGENTS (adverse effects)

**Shaki, Fatemeh**  
ANTIPYRINE (analogs and derivatives)

**Shakir, Munira**  
RETINAL DETACHMENT (surgery)

**Shamim, Romaisa**  
SPLENECTOMY

**Shamim, Samina**  
MUNCHAUSEN SYNDROME BY PROXY  
(diagnosis)

**Shao, Zhixin**  
HOSPITALS

**Shariat, S.M.**  
WATER

**Sharif, Saima**  
MYOCARDIAL ISCHEMIA (blood)

**Sharifi, Farshad**  
DYSLIPIDEMIAS (epidemiology)

**Shaygannejad, Vahid**  
YOGA

**Sheeba, Aneela**  
CESAREAN SECTION

**Sheikh, Naheed Humayun**  
HEPATITIS B (prevention and control)

**Shen, Fengge**  
CANDIDA ALBICANS (drug effects)

**Shetty, Pushparaja**  
CARCINOMA, MUCOEPIDERMOID (diagnosis)

**Shi, Bentao**  
EPIDIDYMITIS

**Shirangi, Alireza**  
LIVER CIRRHOSIS (congenital)

**Shishehbore, Masoud Reza**  
ASCORBIC ACID (analysis)

**Shoba, Guido**  
GASTROINTESTINAL AGENTS

**Shokoohinia, Yalda**  
FERULA

**Shokrgozar, Mohammad Ali**  
LASER THERAPY, LOW-LEVEL

**Shokrzadeh, Mohammad**  
ANTIPYRINE (analogs and derivatives)

**Shruthilaxmi, M.K.**  
CARCINOMA, MUCOEPIDERMOID (diagnosis)

**Shuaib, Muhammad**  
THUMB (abnormalities)

**Shuja, Samia**  
PLACENTA DISEASES (surgery)

**Sial, Safdar**  
KIDNEY NEOPLASMS (pathology)

**Siddiqui, Faisal**  
CHOLANGIOPANCREATOGRAPHY,  
ENDOSCOPIC RETROGRADE

**Sijanovic, Sinisa**  
PREGNANCY, ECTOPIC (therapy)

**Sikka, Pranav**  
LEUKOPLAKIA, ORAL (pathology)

**Sikka, Seema**  
LEUKOPLAKIA, ORAL (pathology)

**Silfeler, Dilek Benk**  
MEAN PLATELET VOLUME

**Silva Castro, G.A.**  
CARBONATES

**Silveira, Felipe Martins**  
ALVEOLAR BONE LOSS (diagnosis)

**Singh, Kamal Dev**  
HEARING LOSS, NOISE-INDUCED

**Sistanizad, Mohammad**  
STROKE (drug therapy)

**Sogbanmu, T.O.**  
CATFISHES

**Sohrabi, Masoudreza**  
LIVER CIRRHOSIS (congenital)

**Soleimanpour, Hassan**  
MASKS

**Sonbol, Hawazen N.**  
DENTAL CARIES (epidemiology)

**Song, Byung jeong**  
HYPOGLYCEMIC AGENTS (pharmacokinetics)

**Song, Chengwu**  
ALISMATACEAE

**Song, Jijun**  
CYTOCHROME P-450 CYP2C9

**Song, Ming Xia**  
THIAZOLES (chemical synthesis)

**Srasra, E.**  
TANNINS

**Strohschon, R.**  
GROUNDWATER

**Sumrein, I.**  
HYSTERECTOMY

- Sun, Mei**  
CRITICAL ILLNESS
- Suoub, Mohammed**  
HYPOSPADIAS (surgery)
- Suresh, Sekar**  
SPERMATOZOA
- Syed, BM**  
CHOLECYSTECTOMY, LAPAROSCOPIC
- Tabassi, Zohreh**  
VITAMINS
- Tabatabaei Malazy, Ozra**  
DYSLIPIDEMIAS (epidemiology)
- Taha, Mohammed M.**  
DIABETIC NEPHROPATHIES
- Tahajjodi, Somayyeh Sadat**  
NICOTINE (pharmacokinetics)
- Taher, Mohammed T.**  
DOXORUBICIN (pharmacology)
- Taheri, Diana**  
PANCREATITIS
- Tahir, Mohammad**  
NIGELLA SATIVA
- VITAMIN A (pharmacology)
- Tahir, Nayyara**  
CARICA
- Taj, Azeem**  
DIABETES MELLITUS, TYPE 2
- Tajziehchi, S.**  
WATER
- Talebi, Ali Reza**  
VARICOCELE
- Talebi, Saeid**  
LASER THERAPY, LOW-LEVEL
- Talhouni, Ahmad**  
MENTHA PIPERITA
- Talpur, K. Altaf Hussain**  
CHOLECYSTECTOMY, LAPAROSCOPIC
- Tao, Qianshan**  
STILL'S DISEASE, ADULT-ONSET
- Tarabieh, Obada M.**  
PROSTATE (pathology)
- Tarawneh, Emad S.**  
HEMANGIOMA, CAVERNOUS, CENTRAL NERVOUS SYSTEM (epidemiology)
- Tariq, Abida**  
NUTRITIONAL STATUS
- Tariq, Naseer Alam**  
WATER MICROBIOLOGY
- Tarzamni, Mohammad Kazem**  
NON-ALCOHOLIC FATTY LIVER DISEASE
- Tatar, Sumeyra**  
CESAREAN SECTION
- Tayarani Najaran, Zahra**  
SOPHORA
- Tehrani, Hatav Ghasemi**  
PREGNANCY, ECTOPIC (diagnosis)
- Tehrani, Hora Jalali**  
ENDOMETRIUM (drug effects)
- Tezcanun, U.**  
ELECTROCOAGULATION
- Toghyani, R.**  
METALS, HEAVY
- Tombolini, I.**  
FORESTS
- Topcu, Hulya**  
KETAMINE (therapeutic use)
- Topolovec, Zlatko**  
PREGNANCY, ECTOPIC (therapy)
- Torabiyani, A.**  
BIOELECTRIC ENERGY SOURCES
- Turan, Guluzar Arzu**  
CESAREAN SECTION
- Uad, I.**  
CARBONATES
- Ucar, Elif Yilmazel**  
HEMOPTYSIS
- Ulusoy, Feridun Vasfi**  
ASPIRIN
- Ulutas, Samiye**  
LEPROSY
- Un, Burak**  
MEAN PLATELET VOLUME
- Ur Rahman, Mahmood**  
FOLIC ACID DEFICIENCY
- Vali, Zahra**  
ASTHMA (genetics)
- Vidosavljevic, Domagoj**  
PREGNANCY, ECTOPIC (therapy)
- Vilchez, J.I.**  
CARBONATES
- Wahab, Shahid**  
RETINAL DETACHMENT



- Walsh, Kieran**  
EDUCATION, MEDICAL
- Wan Ling, Wang**  
CARCINOMA, NON-SMALL-CELL LUNG
- Wang, B.**  
POLYCYCLIC HYDROCARBONS, AROMATIC
- Wang, Chunhuai**  
STILL'S DISEASE, ADULT-ONSET
- Wang, D.W.**  
POLYCYCLIC HYDROCARBONS, AROMATIC
- Wang, De guo**  
DOXYCYCLINE (pharmacology)
- Wang, Dongmei**  
ADRENERGIC BETA-ANTAGONISTS
- Wang, H.**  
ENTEROBACTERIACEAE
- Wang, Huiling**  
VASCULAR ENDOTHELIAL GROWTH FACTOR  
A (blood)
- Wang, Shi Ben**  
THIAZOLES (chemical synthesis)
- Wang, Tuanjie**  
HEART DEFECTS, CONGENITAL
- Wang, Wei**  
CANDIDA ALBICANS (drug effects)
- Wang, Wendong**  
CANDIDA ALBICANS (drug effects)
- Wang, Yuhong**  
VASCULAR ENDOTHELIAL GROWTH FACTOR  
A (blood)
- Wazaify, Mayyada M.**  
COUNSELING
- Wdng, Huiping**  
STILL'S DISEASE, ADULT-ONSET
- Wei, Yongang**  
CARCINOMA, HEPATOCELLULAR
- Wei, Zhi Ping**  
POLYARTERITIS NODOSA
- Woodhouse, Nicholas**  
PHEOCHROMOCYTOMA (drug therapy)
- Woodhouse, Nicolas**  
BLOOD GLUCOSE
- Wu, Rong Rong**  
HEPATITIS C
- Wu, Xiuping**  
CANDIDA ALBICANS (drug effects)
- Wu, Xu**  
DOXYCYCLINE (pharmacology)
- Xian Jun, Feng**  
CARCINOMA, NON-SMALL-CELL LUNG
- Xie, Qiong**  
HOSPITALS
- Xin, Mingxun**  
CANDIDA ALBICANS (drug effects)
- Xiong, Shudao**  
STILL'S DISEASE, ADULT-ONSET
- Xiu guang, Qin**  
CARCINOMA, NON-SMALL-CELL LUNG
- Xu, Jian**  
DOXYCYCLINE (pharmacology)
- Xu, Ren ai**  
CYTOCHROME P-450 CYP2C9
- Yan, Ji**  
DOXYCYCLINE (pharmacology)
- Yan, Kaili**  
STILL'S DISEASE, ADULT-ONSET
- Yang, Hanteng**  
CARCINOMA, HEPATOCELLULAR
- Yang, Jun**  
VASCULAR ENDOTHELIAL GROWTH FACTOR  
A (blood)
- Yang, P.**  
IRON
- Yang, Shangqj**  
EPIDIDYMITIS
- Yao, Jinhua**  
HEART DEFECTS, CONGENITAL
- Yasin, Shahnaz**  
NUTRITIONAL STATUS
- Yasmeen, Farzana**  
ZINC (blood)
- Yayla, Vildan**  
LEPROSY
- Yazdanpanahi, Nasrin**  
BOSWELLIA
- Yazdi, Mina Sharifi**  
ASTHMA (genetics)
- Yektaeian, Afsaneh**  
BOSWELLIA
- Yengil, Erhan**  
MEAN PLATELET VOLUME
- Yildiz, Senol**  
AMPUTATION
- Yildiz, Turan**  
PEPTIC ULCER PERFORATION (therapy)

- Yin, Zhou**  
HOSPITALS
- Yu, Li**  
ADRENERGIC BETA-ANTAGONISTS
- Yu, Lu**  
CANDIDA ALBICANS (drug effects)
- Yu, Shanggong**  
ALISMATACEAE
- Yu, Z.H.**  
WASTE DISPOSAL FACILITIES
- Yu, Zuhu**  
EPIDIDYMITIS
- Yuan, Hongchang**  
CYTOCHROME P-450 CYP2C9
- Yuan, Yan**  
HEART DEFECTS, CONGENITAL
- Zafar, Mubashir**  
SMOKING (epidemiology)
- Zafar, Nadia**  
METAL CERAMIC ALLOYS
- Zafar, Shakir**  
RETINAL DETACHMENT (surgery)
- Zaheer, Zujaja**  
CARICA
- Zahid, Sara**  
MOUTH NEOPLASMS
- Zaker, N. Hadjizadeh**  
POLYCYCLIC HYDROCARBONS, AROMATIC
- Zamani, Farhad**  
LIVER CIRRHOSIS (congenital)
- Zamani, Mahsa**  
YOGA
- Zamani, Nasim**  
ALCOHOLISM (prevention and control)
- Zamiri Akhlaghi, Amir**  
SOPHORA
- Zarandi, Faegheh Baha'addini Beigi**  
RECEPTORS, N-METHYL-D-ASPARTATE  
(antagonists and inhibitors)
- Zhai, Zhimin**  
STILL'S DISEASE, ADULT-ONSET
- Zhang, Jian**  
HEART DEFECTS, CONGENITAL
- Zhang, Jingze**  
CITRUS
- Zhang, Kaili**  
BREAST NEOPLASMS (pathology)
- Zhang, L.W.**  
POLYCYCLIC HYDROCARBONS, AROMATIC
- Zhang, Zhidan**  
CITRUS
- Zhao, S.M.f**  
POLYCYCLIC HYDROCARBONS, AROMATIC
- Zhong, S.**  
WASTE DISPOSAL FACILITIES
- Zhou, Zhipeng**  
CARCINOMA, HEPATOCELLULAR
- Zhu, Hong jun**  
DOXYCYCLINE (pharmacology)
- Zhu, Shi Shu**  
HEPATITIS C
- Zolfaghari, Behzad**  
PANCREATITIS



**Appendix II**

**List of EMR Journals Indexed in  
IMEMR**

**(by country)**



Journal	ISSN
<b>Afghanistan (2)</b>	
Afghan Medical Journal	N/A
AFJPH-Afghanistan Journal of Public Health	N/A
<b>Bahrain (3)</b>	
Arab Journal for Food and Nutrition	1608-8352
Bahrain Medical Bulletin	1012-8298
JBMS-Journal of the Bahrain Medical Society	1015-6321
<b>Egypt (140)</b>	
AAMJ-AI-Azhar Assiut Medical Journal	1687-1693
African Journal of Urology	1110-5704
Afro-Arab Liver Journal	1687-224X
Ain-Shams Journal of Forensic Medicine and Clinical Toxicology	1687-1030
Ain-Shams Medical Journal	0002-2144
AJAIC-Alexandria Journal of Anaesthesia and Intensive Care	N/A
AJM-Alexandria Journal of Medicine	2090-5068
AI-Azhar Journal of Dental Science	1110-6751
AI-Azhar Medical Journal	1110-0400
Alexandria Dental Journal	1110-015X
Alexandria Journal of Food Science and Technology	1687-3920
Alexandria Journal of Hepatogastroenterology	2090-1879
Alexandria Journal of Pediatrics	1687-9945
Alexandria Journal of Pharmaceutical Sciences	1110-1792
Alexandria Journal of Veterinary Science	1110-2407
Alexandria Medical Journal [The]	0516-5849
Annals of Pediatric Surgery	1687-4137
Applied Endocrinology in Egypt	1110-1776
Arab Family Health and Population	N/A
Arab Journal of Biotechnology	1110-6875
Arab Journal of Gastroenterology	1687-1979
Arab Journal of Laboratory Medicine [The]	1110-1822
ASJOG-Ain-Shams Journal of Obstetrics and Gynecology	1697-2193
ASNJ-Alexandria Scientific Nursing Journal	1687-3858
Assiut Medical Journal	1110-0494
Assiut University Bulletin for Environmental Researches	1110-6107
Assiut Veterinary Medical Journal	N/A

Journal	ISSN
Benha Medical Journal	1110-208X
Bulletin of Alexandria Thoracic Association	N/A
Bulletin of Faculty of Pharmacy-Cairo University	1110-0931
Bulletin of Faculty of Physical Therapy-Cairo University	1110-6611
Bulletin of High Institute of Public Health [The]	1110-0036
Bulletin of Pharmaceutical Sciences-Assiut University	1110-0052
Bulletin of the Faculty of Science-University of Alexandria	0568-9619
Bulletin of the National Nutrition Institute of the Arab Republic of Egypt	N/A
Bulletin of the National Research Centre	1110-0591
Bulletin of the Ophthalmological Society of Egypt	0078-5342
Childhood and Development Quarterly	1110-8681
Clinical Diabetes	0891-8929
EDJ-Egyptian Dental Journal	0070-9484
Egyptian Heart Journal [The]	1110-2608
Egyptian Journal of Anatomy [The]	1110-2144
Egyptian Journal of Biomedical Engineering	1012-5558
Egyptian Journal of Biophysics and Biomedical Engineering	1110-8525
Egyptian Journal of Breastfeeding	N/A
Egyptian Journal of Bronchology [The]	1687-8426
Egyptian Journal of Cardiothoracic Anesthesia	1687-9090
Egyptian Journal of Cataract and Refractive Surgery [The]	N/A
Egyptian Journal of Chemistry	0449-2285
Egyptian Journal of Chest Diseases and Tuberculosis [The]	0422-7638
Egyptian Journal of Community Medicine [The]	1110-1865
Egyptian Journal of Dermatology and Andrology	1110-7650
Egyptian Journal of Diabetes [The]	N/A
Egyptian Journal of Food Science	1110-0192
Egyptian Journal of Genetics and Cytology	0046-161X
Egyptian Journal of Histology [The]	1110-0559
Egyptian Journal of Hospital Medicine [The]	1687-2002
Egyptian Journal of Immunology [The]	1110-4902
Egyptian Journal of Medical Human Genetics [The]	1110-8630
Egyptian Journal of Medical Laboratory Sciences	1110-5593

Journal	ISSN
Egyptian Journal of Medical Microbiology	1110-2179
Egyptian Journal of Microbiology	0022-2704
Egyptian Journal of Neonatology [The]	1110-8991
Egyptian Journal of Neurology, Psychiatry and Neurosurgery [The]	1110-1083
Egyptian Journal of Nutrition	1687-1235
Egyptian Journal of Nutrition and Health	1687-7950
Egyptian Journal of Occupational Medicine	1110-1881
Egyptian Journal of Otolaryngology [The]	1012-5574
Egyptian Journal of Paediatrics [The]	1687-1677
Egyptian Journal of Pediatric Allergy and Immunology	1687-1642
Egyptian Journal of Pharmaceutical Sciences	0301-5068
Egyptian Journal of Physiological Sciences	0301-8660
Egyptian Journal of Psychiatry [The]	1110-1105
Egyptian Journal of Schistosomiasis and Infectious and Endemic Diseases	1110-7278
Egyptian Journal of Surgery [The]	1110-1121
Egyptian Journal of Urology	1110-5712
Egyptian Journal of Veterinary Science	1110-0222
Egyptian Liver Journal	2090-6218
Egyptian Medical Journal of the National Research Center	1687-1278
Egyptian Orthodontic Journal	1110-435x
Egyptian Orthopaedic Journal [The]	1110-1148
Egyptian Pharmaceutical Journal [National Research Center]	1687-4315
Egyptian Population and Family Planning Review [The]	N/A
Egyptian Rheumatologist [The]	1110-1164
Egyptian Rheumatology and Rehabilitation	1110-161X
Egyptian Science Magazine [The]	1687-3815
EJB-Egyptian Journal of Biochemistry and Molecular Biology [The]	1687-1502
EJENTAS-Egyptian Journal of ENT and Allied Sciences	2090-0740
EMHJ-Eastern Mediterranean Health Journal	1020-3397
Gazette of the Egyptian Paediatric Association [The]	1110-6638
Health Services Journal of the Eastern Mediterranean Region	1014-9899
JESN-Journal of Egyptian Society of Nephrology [The]	N/A
Journal of Advanced Research	2090-1232
Journal of Childhood Studies	2090-0619
Journal of Drug Research of Egypt	0085-2406



Journal	ISSN
Journal of Hepatology, Gastroenterology and Infectious Diseases	1110-0796
Journal of Legal Medicine and Forensic Sciences [The]	1110-6468
Journal of the Arab Society for Medical Research	1687-4293
Journal of the Egyptian Medical Association [The]	0013-2411
Journal of the Egyptian National Cancer Institute	1110-0362
Journal of the Egyptian Public Health Association [The]	0013-2446
Journal of the Egyptian Society of Endocrinology, Metabolism and Diabetes [The]	1110-1245
Journal of the Egyptian Society of Obstetrics and Gynecology [The]	0258-3216
Journal of the Egyptian Society of Parasitology	1110-0583
Journal of the Egyptian Society of Pharmacology and Experimental Therapeutics [The]	N/A
Journal of the Egyptian Society of Toxicology	1110-127X
Journal of the Medical Research Institute-Alexandria University	1110-0133
JPC-Journal of Pediatric Club [The]	N/A
Kasr El Aini Journal of Surgery	0022-9237
Kasr El-Aini Medical Journal	N/A
Kidney Forum	1369-3050
Mansoura Journal of Pharmaceutical Sciences	1110-1318
Mansoura Medical Bulletin	1012-5590
Mansoura Medical Journal	1110-211X
MDV-Molecular Diagnosis and Vaccine	1687-2010
Medical Journal of Ahmed Maher Teaching Hospital [The]	N/A
Medical Journal of Cairo University [The]	0045-3803
Medical Journal of Teaching Hospitals and Institutes [The]	1110-2039
Minoufia Medical Journal	1110-2098
MJFCT-Mansoura Journal of Forensic Medicine and Clinical Toxicology	1110-5437
Neonatology	1687-0492
New Egyptian Journal of Medicine [The]	1110-1946
Pan Arab Journal of Orthopaedic and Trauma [The]	1607-4912
Population Researches and Studies	N/A
Population Sciences	N/A
Population Studies	1110-1342
PUJ-Parasitologists United Journal	1687-7942
Scientific Journal of Al-Azhar Medical Faculty [Girls] [The]	1110-2381
Scientific Journal of El-Minia Faculty of Medicine [The]	1110-2446
Scientific Medical Journal	1110-5607

Journal	ISSN
Sohag Medical Journal	1110-7529
South Valley Medical Journal	1110-7529
Suez Canal University Medical Journal	1110-6999
Tanta Medical Journal	1110-1415
Tanta Medical Sciences Journal	1687-5788
Veterinary Medical Journal	1110-1423
Zagazig Journal of Forensic Medicine and Toxicology	1687-160X
Zagazig Journal of Pharmaceutical Sciences	1110-5089
Zagazig Medical Association Journal	1110-2322
Zagazig University Medical Journal	1110-1431
<b>Iraq (30)</b>	
Al-Kindy College Medical Journal	1810-9543
Almustansiriya Journal of Pharmaceutical Sciences	1815-0993
Annals of the College of Medicine-Mosul	0028-1446
Basrah Journal of Surgery	N/A
Bulletin of Endemic Disease-Baghdad	0007-4845
DMJ-Dohuk Medical Journal	2071-7326
IMJ-Iraqi Medical Journal	0304-4564
IOJ-Iraqi Orthodontic Journal	1816-0581
IPMJ-Iraqi Postgraduate Medical Journal	1608-8360
Iraqi Army Medical Journal	N/A
Iraqi Journal of Agriculture	1818-6645
Iraqi Journal of Biotechnology	N/A
Iraqi Journal of Community Medicine	1684-5382
Iraqi Journal of Medical Sciences	1681-6579
Iraqi Journal of Microbiology	N/A
Iraqi Journal of Pharmaceutical Sciences	N/A
Iraqi Journal of Tropical Disease Researches	1814-0823
Journal of Baghdad College of Dentistry	1680-0057
Journal of Basic Medical Sciences	N/A
Journal of Community Medicine	N/A
Journal of Dohuk University	1812-7568
Journal of Karbala University	1813-0410
Journal of the Faculty of Medicine-Baghdad	0041-9419
Kufa Medical Journal	N/A

Journal	ISSN
Medical Journal of Basrah University [The]	0253-0759
Medical Journal of Tikrit University [The]	N/A
New Iraqi Journal of Medicine [The]	1817-5562
Risafa Medical Journal	N/A
Scientific Nursing Journal	1812-2388
Zanco Journal of Medical Sciences	1995-5588
<b>Islamic Republic of Iran (217)</b>	
ABJS-Archives of Bone and Joint Surgery [The]	2345-4644
Acta Medica Iranica	0044-6025
Advances in Cognitive Science	1561-4174
AJMB-Avicenna Journal of Medical Biotechnology	2008-2835
Anatomical Sciences Journal	N/A
Anesthesiology and Pain Medicine	2228-7523
Annals of Military and Health Sciences Research	2383-1960
Archive of Breast Cancer	2383-0425
Archives of Clinical Infectious Diseases	2641-2345
Archives of Iranian Medicine	1029-2977
Archives of Trauma Research	2251-953X
Armaghane-danesh	1728-6506
ARYA Atherosclerosis Journal	1735-3955
Asia Oceania Journal of Nuclear Medicine and Biology	2322-5718
Asian Journal of Sports Medicine	2008-000X
Audiology	1735-1936
Avicenna Journal of Phytomedicine [AJP]	2228-7930
Basic and Clinical Neurosciences	2228-7442
BCCR-Basic and Clinical Cancer Research	2228-6527
BEAT-Bulletin of Emergency and Trauma	2322-2522
Bina Journal of Ophthalmology	1026-6399
Cell Journal [Yakhteh]	2228-5806
DARU-Journal of Pharmaceutical Sciences	1560-8115
DENA-Quarterly Journal of Yasuj Faculty of Nursing and Midwifery	1735-8450
Dermatology and Cosmetic Quarterly	2008-7470
DRJ-Dental Research Journal	1735-3327
EBNESINA-Medical Journal of Military Medicine [The]	1735-9503
Endovascular Journal	2008-1812

Journal	ISSN
Feyz-Journal of Kashan University of Medical Sciences	1029-7855
Frontiers in Biomedical Technologies	2345-5829
Gastroenterology and Hepatology from Bed to Bench	2010-2258
Genetics in the 3rd Millennium	1728-6182
Govaresh	1560-7186
HAKIM Research Journal	1561-252X
HAYAT-Journal of Faculty of Nursing and Midwifery [The]	1735-2215
Health Information Management	1735-7853
Hepatitis Monthly	1735-143X
Homa-ye-Salamat	2008-2002
Hormozgan Medical Journal	1735-2223
Hospital-Journal of Iranian Scientific Hospital Association	2008-1982
IBJ-Iranian Biomedical Journal	1028-852X
IEJ-Iranian Endodontic Journal	1735-7497
IHJ-Iranian Heart Journal	1735-7306
IJBC-Iranian Journal of Blood and Cancer	2008-4595
IJB-Iranian Journal of Biotechnology	1728-3043
IJCBNM-International Journal of Community Based Nursing and Midwifery	2322-2476
IJCN-Iranian Journal of Child Neurology	1735-4668
IJEM-Iranian Journal of Endocrinology and Metabolism	1683-4844
IJFS-International Journal of Fertility and Sterility	2008-076X
IJHOSCR-International Journal of Hematology-Oncology and Stem Cell Research	2008-2207
IJHPM-International Journal of Health Policy and Management	N/A
IJI-Iranian Journal of Immunology	1735-1383
IJKD-Iranian Journal of Kidney Diseases	1735-8582
IJME-Iranian Journal of Medical Education	1608-9359
IJM-Iranian Journal of Microbiology	2008-3289
IJMCM-International Journal of Molecular and Cellular Medicine	2251-9637
IJMS-Iranian Journal of Medical Sciences	0253-0716
IJN-Iranian Journal of Neonatology	2251-7510
IJOH-International Journal of Occupational Hygiene	2008-5109
IJO-Iranian Journal of Orthodontics	1735-5087
IJP-International Journal of Pediatrics	2345-5047
IJPM-International Journal of Preventive Medicine	2008-7802
IJPR-Iranian Journal of Pharmaceutical Research	1735-0328

Journal	ISSN
IJRM-Iranian Journal of Reproductive Medicine	1680-6433
IJVM-Iranian Journal of Veterinary Medicine	2251-8894
International Cardiovascular Research Journal	2251-9130
International Journal of Endocrinology and Metabolism	1726-913X
International Journal of Environmental Research	1735-6865
International Journal of Environmental Science and Technology	1735-1472
International Journal of High Risk Behaviors and Addiction	2251-8711
International Journal of Mycobacteriology	2212-5531
International Journal of Occupational and Environmental Medicine	2008-6520
International Journal of Organ Transplantation Medicine	2008-6490
International Journal of Radiation Research	2322-3243
International Journal of Women's Health and Reproduction Sciences	N/A
Iran Journal of Nursing	2008-5923
Iran Occupational Health	1735-5133
Iranian Journal of Allergy, Asthma and Immunology	1735-1502
Iranian Journal of Arthropod-Borne Diseases	1735-7179
Iranian Journal of Basic Medical Sciences	2008-3866
Iranian Journal of Cancer Prevention	2008-2398
Iranian Journal of Dermatology	0021-082X
Iranian Journal of Diabetes and Lipid Disorders	1726-7544
Iranian Journal of Diabetes and Obesity	2008-6792
Iranian Journal of Environmental Health Science and Engineering	1735-1979
Iranian Journal of Epidemiology	1735-7489
Iranian Journal of Health and Environment	2008-2029
Iranian Journal of Medical Microbiology	1735-8612
Iranian Journal of Medical Physics	1735-160X
Iranian Journal of Nuclear Medicine	1681-2824
Iranian Journal of Nursing and Midwifery Research [IJNMR]	1735-9066
Iranian Journal of Nursing Research	1735-7012
Iranian Journal of Nutrition Sciences and Food Technology	1735-7756
Iranian Journal of Obstetric, Gynecology and Infertility [The]	1680-2993
Iranian Journal of Ophthalmology	1735-4153
Iranian Journal of Otorhinolaryngology	1560-1293
Iranian Journal of Parasitology	1735-7020
Iranian Journal of Pediatrics	2008-2142

Journal	ISSN
Iranian Journal of Psychiatric Nursing	2345-2501
Iranian Journal of Psychiatry	1735-4587
Iranian Journal of Psychiatry and Behavioral Sciences	1735-8639
Iranian Journal of Psychiatry and Clinical Psychology [IJPCP]	1735-4315
Iranian Journal of Public Health	0304-4556
Iranian Journal of Radiology	1735-1065
Iranian Journal of Veterinary Research	1728-1997
Iranian Rehabilitation Journal	1735-3602
JBUMS-Journal of Babol University of Medical Sciences	1561-4107
JCR-Journal of Craniomaxillofacial Research	5489-2345
JCVTR-Journal of Cardiovascular and Thoracic Research	2008-5117
JDT-Journal of Dentistry Tehran University of Medical Sciences	1735-2150
JMB-Journal of Medical Bacteriology	2251-8649
JMR-Journal of Medical Research	1728-1962
JNE-Journal of Nursing Education	3812-2322
JNP-Journal of Nephropathology	2251-8363
Journal of Anesthesiology and Pain	2228-6659
Journal of Arak University of Medical Sciences-Rahavard Danesh	1735-5338
Journal of Cardio-Thoracic Medicine	2345-2447
Journal of Dental Materials and Techniques	2322-4150
Journal of Dental Medicine-Tehran University of Medical Sciences	1024-641X
Journal of Dental Research, Dental Clinics, Dental Prospects	2008-210X
Journal of Dental School-Shahid Beheshti University of Medical Sciences	1735-7683
Journal of Dentistry-Shiraz University of Medical Sciences	1728-3426
Journal of Environmental Studies	1025-8620
Journal of Family and Reproductive Health	1735-8949
Journal of Fundamentals of Mental Health [The]	1028-6918
Journal of Gorgan University of Medical Sciences	1562-4765
Journal of Guilan University of Medical Sciences	2008-4048
Journal of Health Administration	2008-1200
Journal of Health and Safety at Work	2251-807X
Journal of Health Promotion Management [JHPM]	2251-8614
Journal of Health Scope	2251-8959
Journal of Hygiene and Health	1735-2363
Journal of Injury and Violence Research	2008-2053

Journal	ISSN
Journal of Isfahan Dental School	1735-255X
Journal of Isfahan Medical School	1027-7595
Journal of Islamic Dental Association of Iran [The]-JIDA	1024-6428
Journal of Jahrom University of Medical Sciences	2008-7993
Journal of Kerman University of Medical Sciences	1023-9510
Journal of Kermanshah University of Medical Sciences [KUMS]	2251-9068
Journal of Lasers in Medical Sciences	2008-9783
Journal of Mashhad Dental School	1560-9286
Journal of Mazandaran University of Medical Sciences	1735-9260
Journal of Medical Council of Islamic Republic of Iran	1562-1073
Journal of Medical Education	1735-3998
Journal of Medicinal Plants	1684-0240
Journal of Minimally Invasive Surgical Sciences	2251-7022
Journal of Modern Rehabilitation	2008-2576
Journal of Nursing and Midwifery Quarterly-Shaheed Beheshti University of Medical Sciences and Health Services	1605-8941
Journal of Ophthalmic and Vision Research	2008-2010
Journal of Patient Safety and Quality Improvement	2345-4482
Journal of Periodontology and Implant Dentistry	2008-7748
Journal of Qazvin University of Medical Sciences [The]	1561-3666
Journal of Rafsanjan University of Medical Sciences	1735-3165
Journal of Rehabilitation	1607-2960
Journal of Reproduction and Infertility	2228-5482
Journal of Research in Behavioural Sciences	1735-2029
Journal of Research in Dental Sciences	2008-4676
Journal of Research in Health Sciences [JRHS]	1682-2765
Journal of Research in Medical Sciences	1735-5311
Journal of Safety Promotion and Injury Prevention	N/A
Journal of School of Public Health and Institute of Public Health Research	1735-7586
Journal of Screening and Geographical Medicine	1735-7594
Journal of Shaheed Sadoughi University of Medical Sciences and Health Services	1562-272X
Journal of Shahrekord University of Medical Sciences	1735-1448
Journal of Tehran University Heart Center [The]	1735-8620
Journal of Veterinary Research	2008-2525
Journal of Zahedan University of Medical Sciences and Health Services	1735-076X
Journal of Zanjan University of Medical Sciences and Health Services	1606-9366

Journal	ISSN
JPC-Journal of Pharmaceutical Care	2322-4630
JRH-Journal of Research and Health	2251-6395
JRMS-Journal of Research in Medical Sciences	1735-1995
JRRS-Journal of Research in Rehabilitation Sciences	1735-7519
Jundishapur Journal of Microbiology [JJM]	2008-3645
Jundishapur Journal of Natural Pharmaceutical Products	1735-7780
Jundishapur Scientific Medical Journal	2252-052x
KOOMESH-Journal of the Semnan University of Medical Sciences	1608-7046
Medical Journal of Mashad University of Medical Sciences	1735-4013
Medical Journal of Tabriz University of Medical Sciences and Health Services	1608-5671
Medical Journal of the Islamic Republic of Iran	1016-1430
Medical Laboratory Journal	1735-9007
Medical Sciences Journal of Islamic Azad University	1023-5922
Medical-Surgical Nursing Journal	2322-178X
MEJC-Middle East Journal of Cancer	2008-6709
Middle East Journal of Digestive Diseases	2008-5230
Modares Journal of Medical Sciences, Pathobiology	1562-9554
Nephro-Urology Monthly	2251-7006
Novelty in Biomedicine	2345-3346
Nursing and Midwifery Research	1753-5001
Ofogh-E-Danesh	1735-1855
Payavard-Salamat	1735-8132
Payesh-Health Monitor	1680-7626
Pejouhandeh: Bimonthly Research Journal	1735-1022
Qom University of Medical Sciences Journal	1735-7799
Quarterly Journal of Medical Ethics	2008-4374
Quarterly Journal of Medical Law	N/A
Quarterly Journal of Sabzevar University of Medical Sciences	1606-7487
Quarterly Scientific Journal of Relief and Rescue	2008-4544
Razi Journal of Medical Sciences	2228-7043
Research in Cardiovascular Medicine	2251-9572
RMM-Research in Molecular Medicine	2322-1348
Salmand-Iranian Journal of Aging	1735-806X
Scientific and Research Journal of Army University of Medical Sciences-JAUMS	1727-1789
Scientific Journal of Forensic Medicine	1027-1457



Journal	ISSN
Scientific Journal of Iranian Blood Transfusion Organization [The]	1027-9520
Scientific Journal of Kurdistan University of Medical Sciences	1560-652X
Social Welfare Quarterly	1735-8191
Strides in Development of Medical Education	1735-4242
Tanaffos	1735-0344
Teb Va Tazkie	1608-2397
Tehran University Medical Journal [TUMJ]	1683-1764
Thrita Student Journal of Medical Sciences	2251-8312
Toloo-e-Behdasht	1728-5127
Trauma Monthly	2251-7464
Urology Journal	1735-1308
WJPS-World Journal of Plastic Surgery	2228-7914
Yafteh Journal	1563-0773
Zahedan Journal of Research in Medical Sciences	N/A
<b>Jordan (9)</b>	
Arab Journal of Psychiatry [The]	1016-8923
Dirasat	1026-3764
Jordan Journal of Pharmaceutical Sciences	1995-7157
Jordan Medical Journal	0446-9283
Journal of the Royal Medical Services	2078-8703
Medical Journal of Islamic World Academy of Sciences	1016-3360
Pan Arab Medical Journal	N/A
Population Bulletin of ESCWA	0258-1914
Smile Dental Journal	2072-473X
<b>Kuwait (6)</b>	
Bulletin of Nutrition and Food	N/A
Bulletin of the Kuwait Institute for Medical Specialization	N/A
GJO-Gulf Journal of Oncology [The]	2078-2101
KMJ-Kuwait Medical Journal	0023-5776
Medical Arabization	N/A
Medical Principles and Practice	1011-7571
<b>Lebanon (10)</b>	
ACES-Actualites Cliniques et Scientifiques	1683-8068
AJU-Arab Journal of Urology	N/A
Arab Dental Journal	N/A

Journal	ISSN
IAJD-International Arab Journal of Dentistry	2218-0885
JLDA-Journal of the Lebanese Dental Association	1810-9632
Journal of the Arab Neonatology Forum	1812-1756
Lebanese Science Journal	1561-3410
LMJ-Lebanese Medical Journal	0023-9852
Middle East Journal of Anesthesiology	0544-0440
Middle East Journal of Family Medicine	N/A
<b>Libya (6)</b>	
DMJ-Derna Medical Journal	N/A
Garyounis Medical Journal	0254-7198
JMJ-Jamahiriya Medical Journal	N/A
Libyan Journal of Infectious Diseases [The]	N/A
LJM-Libyan Journal of Medicine	1993-2820
Tabib Attifil Alarabi	N/A
<b>Morocco (7)</b>	
Bulletin Epidemiologique	0851-8238
ISESCO Journal of Science and Technology	2028-8077
Journal du Practicien	1113-5667
Maroc Medical	0253-4053
Revue Marocaine de Chirurgie Orthopedique et Traumatologique	N/A
Revue Marocaine de Medecine et Sante	0251-0758
Revue Marocaine des Maladies de L'Enfant	N/A
<b>Oman (3)</b>	
Oman Journal of Ophthalmology	0974-620X
Oman Medical Journal	1999-768X
SQUMJ-Sultan Qaboos University Medical Journal	2075-051X
<b>Pakistan (83)</b>	
Al-Shifa Journal of Ophthalmology	1990-3863
Anaesthesia, Pain and Intensive Care	1607-8322
Annals Abbassi Shaheed Hospital and Karachi Medical and Dental College	1563-3241
Annals of Jinnah Postgraduate Medical Centre - Karachi	N/A
Annals of King Edward Medical College	1684-6680
APMC-Annals of Punjab Medical College	1024-8919
Bahria Journal of Professional Psychology	1816-0840
Biomedica	1992-4852

Journal	ISSN
Challenge-Quarterly [The]	0528-7944
Community Medicine	0301-7265
Diabetes Digest	1369-7501
Esculapio	2309-3080
FWU Journal of Social Sciences	1995-1272
GJMS-Gomal Journal of Medical Sciences	1819-7973
Hamdard Medicus	0250-7188
Health [The]	2218-3299
IJEHSR-International Journal of Endorsing Health Science Research	2307-3748
Infectious Diseases Journal of Pakistan	1027-0299
International Journal of Pathology	1810-0155
Isra Medical Journal	2073-8285
JAMC-Journal of Ayub Medical College-Abbotabad-Pakistan	1025-9589
JCPSP-Journal of the College of Physicians and Surgeons Pakistan	1022-386X
JDUHS-Journal of the Dow University of Health Sciences	1995-2198
JIMDC-Journal of Islamabad Medical and Dental College	2227-3875
JKCD-Journal of Khyber College of Dentistry	2220-2633
JLUMHS-Journal of the Liaquat University of Medical Health Sciences	1729-0341
JOPDAK-Journal of the Pakistan Dental Association Karachi	1680-2292
Journal of Basic and Applied Sciences	1814-8085
Journal of Medical Sciences	1682-4474
Journal of Medical Sciences	1997-3438
Journal of Nephrology Urology and Transplantation	N/A
Journal of Surgery [The]	1681-4517
JPAD-Journal of Pakistan Association of Dermatologists	1560-9014
JPDA-Journal of the Pakistan Dental Association	1680-2292
JPIMS-Journal of Pakistan Institute of Medical Sciences	1683-6928
JPMA-Journal of Pakistan Medical Association	0030-9982
JPMI-Journal of Postgraduate Medical Institute	1013-5472
JPPS-Journal of Pakistan Psychiatric Society	1726-8710
JSOGP-Journal of the Society of Obstetricians and Gynaecologists of Paksitan	N/A
JSP-Journal of Surgery Pakistan International	1817-0242
KMUJ-Khyber Medical University Journal	2072-7763
Lahore Journal of Public Health	N/A
Medical Channel	1681-5491

Journal	ISSN
Medical Forum Monthly	1029-385X
Medical Spectrum [The]	0254-8534
Medicine Today	1813-9876
Mother and Child	0379-2617
PAFMJ-Pakistan Armed Forces Medical Journal	0030-9648
Pakistan Heart Journal	0048-2706
Pakistan Journal of Biochemistry	0300-8185
Pakistan Journal of Chest Medicine	N/A
Pakistan Journal of Clinical Psychology	1019-438X
Pakistan Journal of Community Medicine [The]	N/A
Pakistan Journal of Health	N/A
Pakistan Journal of Medical and Health Sciences	1996-7195
Pakistan Journal of Medical Ethics	N/A
Pakistan Journal of Medical Sciences	1682-024X
Pakistan Journal of Neurological Sciences	1990-6269
Pakistan Journal of Neurology	N/A
Pakistan Journal of Obstetrics and Gynaecology	N/A
Pakistan Journal of Orthodontics, Pediatric and Community Dentistry	1608-134X
Pakistan Journal of Otolaryngology-Head and Neck Surgery	0257-4985
Pakistan Journal of Pathology	1024-6193
Pakistan Journal of Pharmaceutical Sciences	1011-601X
Pakistan Journal of Pharmacology	0255-7088
Pakistan Journal of Physiology	1819-270X
Pakistan Journal of Psychology	0030-9869
Pakistan Journal of Scientific and Industrial Research	0030-9885
Pakistan Journal of Scientific and Industrial Research Series A: Physical Sciences	2221-6413
Pakistan Journal of Scientific and Industrial Research Series B: Biological Sciences	2221-6421
Pakistan Medical Journal	0031-000X
Pakistan Ophthalmology	0259-3661
Pakistan Oral and Dental Journal	1012-8700
Pakistan Pediatric Journal	0304-4904
PJC-Pakistan Journal of Cardiology	1016-1244
PJMR-Pakistan Journal of Medical Research	0030-9842
PJO-Pakistan Journal of Ophthalmology	0886-3067
PJPH-Pakistan Journal of Public Health	2225-0891

Journal	ISSN
PJS-Pakistan Journal of Surgery	0258-8552
POJ-Pakistan Orthodontic Journal	2074-0069
Proceedings-Shaikh Zayed Postgraduate Medical Institute	N/A
Professional Medical Journal-Quarterly [The]	1024-8919
RMJ-Rawal Medical Journal	0303-5212
<b>Palestine (3)</b>	
Al-Quds Medical Journal	N/A
Annals of Alquds Medicine	1815-2635
PMJ-Palestinian Medical Journal	N/A
<b>Qatar (4)</b>	
Gulf Journal of Dermatology and Venereology [The]	N/A
Heart Views	1995-705X
JEMTAC-Journal of Emergency Medicine, Trauma and Acute Care	1999-7086
Qatar Medical Journal	0253-8253
<b>Saudi Arabia (29)</b>	
Annals of Saudi Medicine	0256-4947
Annals of Thoracic Medicine	1817-1737
Hematology, Oncology and Stem Cell Therapy	1658-3876
International Journal of Diabetes Mellitus	1877-5934
International Journal of Health Sciences	1658-3639
Journal of Epidemiology and Global Health	2210-6006
Journal of Family and Community Medicine	1319-1683
Journal of Infection and Public Health	1876-0341
Journal of King Abdulaziz University-Medical Sciences	1319-1004
Journal of Taibah University Medical Sciences	1658-3612
Journal of the Saudi Heart Association	1016-7315
MEAJO-Middle East African Journal of Ophthalmology	0974-9233
Neurosciences	1319-6138
Pan Arab Journal of Neurosurgery	1319-6995
Rehabilitation International	N/A
Research Centre Bulletin	1019-5335
Saudi Epidemiology Bulletin	1319-3965
Saudi Heart Journal	1018-077X
Saudi Journal of Disability and Rehabilitation	1319-6499
Saudi Journal of Gastroenterology [The]	1319-3767

Journal	ISSN
Saudi Journal of Oto-Rhino-Laryngology Head and Neck Surgery [The]	1319-8491
Saudi Journal of Sports Medicine [The]	1319-6308
Saudi Medical Journal	0379-5284
SDJ-Saudi Dental Journal [The]	1013-9052
SGH Medical Journal	1658-2489
SJA-Saudi Journal of Anaesthesia	1658-354X
SJO-Saudi Journal of Ophthalmology	1319-4534
SPJ-Saudi Pharmaceutical Journal	1319-0164
Urology Annals	0974-7796
<b>Sudan (10)</b>	
AJNT-Arab Journal of Nephrology and Transplantation	1858-554X
Gezira Journal of Health Sciences	1810-5386
JMJ-Juba Medical Journal	N/A
Khartoum Pharmacy Journal	N/A
Omdurman Journal of Pharmaceutical Sciences	N/A
SJPH-Sudanese Journal of Public Health	1990-7567
Sudan Journal of Medical Sciences	1858-5051
Sudan Medical Journal	0491-4481
Sudan Medical Monitor	1858-5000
Sudanese Journal of Dermatology	1815-3941
<b>Syrian Arab Republic (10)</b>	
Arab Journal of Pharmaceutical Sciences	1683-0369
Arabic Journal of Forensic Medicine and Criminal Science	N/A
Arabic Medical Journal	N/A
Damascus University Journal for Health Sciences	2072-2265
JABHS-Journal of the Arab Board of Health Specializations	1561-0217
JISHIM-Journal of the International Society for the History of Islamic Medicine	1303-667X
Journal of Clinical Laboratory [The]	1814-411X
Journal of the Arab Board of Medical Specializations	1561-0217
Journal of the Arab Dentist	N/A
Research Journal of Aleppo University-Medical Sciences Series	N/A
<b>Tunisia (9)</b>	
Archives de l'Institut Pasteur de Tunis	0020-2509
Cahiers Medicaux de Tunisie	0300-5291
IDEES-Revue de Perfectionnement Medical et Paramedical	N/A

Journal	ISSN
Maghreb Medical	0330-258X
Revue Maghrebine de Pediatrie [La]	0330-7611
Revue Maghrebine d'Endocrinologie - Diabete et de Reproduction [La]	N/A
Revue Tunisienne d'Infectiologie	1737-8958
SST-Sante et Securite au Travail	N/A
Tunisie Medicale [La]	0041-4131
<b>United Arab Emirates (5)</b>	
EMJ-Emirates Medical Journal	0250-6882
Gulf Medical University: Proceedings	2306-6865
HMJ-Hamdan Medical Journal	2227-2437
International Journal of Diabetes and Metabolism	1606-7754
IRCMJ-Iranian Red Crescent Medical Journal	1561-4395
<b>Yemen (8)</b>	
HJMS-Hadramout Journal of Medical Sciences	2224-1806
Journal of Tropical Nephro-Urology	N/A
Sana'a University Journal of Medical Sciences	N/A
University of Aden Journal of Natural and Applied Sciences	1606-8947
Yemeni Journal for Medical Sciences [The]	N/A
YHMRJ-Yemeni Health and Medical Research Journal	N/A
YJMRH-Yemeni Journal of Medical and Health Research	N/A
YMJ-Yemen Medical Journal	N/A

Last update December 2015

**Appendix III**

**List of EMR Journals Indexed in  
IMEMR**

**(by title)**





S/N	Journal	ISSN
1	AAMJ-Al-Azhar Assiut Medical Journal	1687-1693
2	ABJS-Archives of Bone and Joint Surgery [The]	2345-4644
3	ACES-Actualites Cliniques et Scientifiques	1683-8068
4	Acta Medica Iranica	0044-6025
5	Advances in Cognitive Science	1561-4174
6	Afghan Medical Journal	N/A
7	AFJPH-Afghanistan Journal of Public Health	2308-2895
8	African Journal of Urology	1110-5704
9	Afro-Arab Liver Journal	1687-224X
10	Ain-Shams Journal of Forensic Medicine and Clinical Toxicology	1687-1030
11	Ain-Shams Medical Journal	0002-2144
12	AJAIC-Alexandria Journal of Anaesthesia and Intensive Care	N/A
13	AJM-Alexandria Journal of Medicine	2090-5068
14	AJMB-Avicenna Journal of Medical Biotechnology	2008-2835
15	AJNT-Arab Journal of Nephrology and Transplantation	1858-554X
16	AJU-Arab Journal of Urology	2090-598X
17	Al-Azhar Journal of Dental Science	1110-6751
18	Al-Azhar Medical Journal	1110-0400
19	Alexandria Dental Journal	1110-015X
20	Alexandria Journal of Food Science and Technology	1687-3920
21	Alexandria Journal of Hepatogastroenterology	2090-1879
22	Alexandria Journal of Pediatrics	1687-9945
23	Alexandria Journal of Pharmaceutical Sciences	1110-1792
24	Alexandria Journal of Veterinary Science [AJVS]	1110-2407
25	Alexandria Medical Journal [The]	0516-5849
26	Al-Kindy College Medical Journal	1810-9543
27	Al-Majallah Al-Tibbiya Al-Arabiyyah	N/A
28	Almustansiriya Journal of Pharmaceutical Sciences	1815-0993
29	Al-Quds Medical Journal	N/A
30	Al-Shifa Journal of Ophthalmology	1990-3863
31	Anaesthesia, Pain and Intensive Care	1607-8322
32	Anatomical Sciences Journal	N/A
33	Anesthesiology and Pain Medicine	2228-7523
34	Annals Abbassi Shaheed Hospital and Karachi Medical and Dental College	1563-3241
35	Annals of Alquds Medicine	1815-2635

S/N	Journal	ISSN
36	Annals of Jinnah Postgraduate Medical Centre - Karachi	N/A
37	Annals of King Edward Medical College	1684-6680
38	Annals of Military and Health Sciences Research	2383-1960
39	Annals of Pediatric Surgery	1687-4137
40	Annals of Saudi Medicine	0256-4947
41	Annals of the College of Medicine-Mosul	0028-1446
42	Annals of Thoracic Medicine	1817-1737
43	APMC-Annals of Punjab Medical College	2077-9143
44	Applied Endocrinology in Egypt	1110-1776
45	Arab Dental Journal	N/A
46	Arab Family Health and Population	N/A
47	Arab Journal for Food and Nutrition	1608-8352
48	Arab Journal of Biotechnology	1110-6875
49	Arab Journal of Gastroenterology	1687-1979
50	Arab Journal of Laboratory Medicine [The]	1110-1822
51	Arab Journal of Pharmaceutical Sciences	1683-0369
52	Arab Journal of Psychiatry [The]	1016-8923
53	Arabic Journal of Forensic Medicine and Criminal Science	N/A
54	Arabic Medical Journal	N/A
55	Archive of Breast Cancer	2383-0425
56	Archives de l'Institut Pasteur de Tunis	0020-2509
57	Archives of Clinical Infectious Diseases	2641-2345
58	Archives of Iranian Medicine	1029-2977
59	Archives of Trauma Research	2251-953X
60	Armaghane-danesh	1728-6506
61	ARYA Atherosclerosis Journal	1735-3955
62	Asia Oceania Journal of Nuclear Medicine and Biology	2322-5718
63	Asian Journal of Sports Medicine	2008-000X
64	ASJOG-Ain-Shams Journal of Obstetrics and Gynecology	1697-2193
65	ASNJ-Alexandria Scientific Nursing Journal	1687-3858
66	Assiut Medical Journal	1110-0494
67	Assiut University Bulletin for Environmental Researches	1110-6107
68	Assiut Veterinary Medical Journal	N/A
69	Audiology	1735-1936
70	Avicenna Journal of Phytomedicine [AJP]	2228-7930

S/N	Journal	ISSN
71	Bahrain Medical Bulletin	1012-8298
72	Bahria Journal of Professional Psychology	1816-0840
73	Basic and Clinical Neuroscience	2008-126X
74	Basrah Journal of Surgery	1683-3589
75	BCCR-Basic and Clinical Cancer Research	2228-6527
76	BEAT-Bulletin of Emergency and Trauma	2322-2522
77	Benha Medical Journal	1110-208X
78	Bina Journal of Ophthalmology	1026-6399
79	Biomedica	1992-4852
80	Bulletin Epidemiologique	0851-8238
81	Bulletin of Alexandria Thoracic Association	1687-997X
82	Bulletin of Endemic Disease-Baghdad	0007-4845
83	Bulletin of Faculty of Pharmacy-Cairo University	1110-0931
84	Bulletin of Faculty of Physical Therapy-Cairo University	1110-6611
85	Bulletin of High Institute of Public Health [The]	1110-0036
86	Bulletin of Nutrition and Food	N/A
87	Bulletin of Pharmaceutical Sciences-Assiut University	1110-0052
88	Bulletin of the Faculty of Science-University of Alexandria	0568-9619
89	Bulletin of the Kuwait Institute for Medical Specialization	N/A
90	Bulletin of the National Nutrition Institute of the Arab Republic of Egypt	N/A
91	Bulletin of the National Research Centre	1110-0591
92	Bulletin of the Ophthalmological Society of Egypt	0078-5342
93	Cahiers Medicaux de Tunisie	0300-5291
94	Cell Journal [Yakhteh]	2228-5806
95	Challenge-Quarterly [The]	0528-7944
96	Childhood and Development Quarterly	1110-8681
97	Clinical Diabetes	0891-8929
98	Community Medicine	0301-7265
99	Damascus University Journal for Health Sciences	2072-2265
100	DARU-Journal of Pharmaceutical Sciences	1560-8115
101	DENA-Quarterly Journal of Yasuj Faculty of Nursing and Midwifery	1735-8450
102	Dermatology and Cosmetic Quarterly	2008-7470
103	Diabetes Digest	1369-7501
104	Dirasat	1026-3764
105	DMJ-Derna Medical Journal	N/A

S/N	Journal	ISSN
106	DMJ-Dohuk Medical Journal	2071-7326
107	DRJ-Dental Research Journal	1735-3327
108	Eastern Mediterranean Region Drugs Digest	1040-2312
109	Eastern Mediterranean Region Epidemiological Bulletin	1014-2347
110	EBNESINA-Medical Journal of Military Medicine [The]	1735-9503
111	EDJ-Egyptian Dental Journal	0070-9484
112	Egyptian Heart Journal [The]	1110-2608
113	Egyptian Journal of Anatomy [The]	1110-2144
114	Egyptian Journal of Biomedical Engineering	1012-5558
115	Egyptian Journal of Biophysics and Biomedical Engineering	1110-8525
116	Egyptian Journal of Breastfeeding	N/A
117	Egyptian Journal of Bronchology [The]	1687-8426
118	Egyptian Journal of Cardiothoracic Anesthesia	1687-9090
119	Egyptian Journal of Cataract and Refractive Surgery [The]	N/A
120	Egyptian Journal of Chemistry	0449-2285
121	Egyptian Journal of Chest Diseases and Tuberculosis [The]	0422-7638
122	Egyptian Journal of Community Medicine [The]	1110-1865
123	Egyptian Journal of Dermatology and Andrology	1110-7650
124	Egyptian Journal of Diabetes [The]	N/A
125	Egyptian Journal of Food Science	1110-0192
126	Egyptian Journal of Genetics and Cytology	0046-161X
127	Egyptian Journal of Histology [The]	1110-0559
128	Egyptian Journal of Hospital Medicine [The]	1687-2002
129	Egyptian Journal of Immunology [The]	1110-4902
130	Egyptian Journal of Medical Human Genetics [The]	1110-8630
131	Egyptian Journal of Medical Laboratory Sciences	1110-5593
132	Egyptian Journal of Microbiology	0022-2704
133	Egyptian Journal of Neonatology [The]	1110-8991
134	Egyptian Journal of Neurology, Psychiatry and Neurosurgery [The]	1110-1083
135	Egyptian Journal of Nutrition	1687-1235
136	Egyptian Journal of Nutrition and Health	1687-7950
137	Egyptian Journal of Occupational Medicine	1110-1881
138	Egyptian Journal of Otolaryngology [The]	1012-5574
139	Egyptian Journal of Paediatrics [The]	1687-1677
140	Egyptian Journal of Pediatric Allergy and Immunology [The]	1687-1642

S/N	Journal	ISSN
141	Egyptian Journal of Pharmaceutical Sciences	0301-5068
142	Egyptian Journal of Physiological Sciences	0301-8660
143	Egyptian Journal of Psychiatry [The]	1110-1105
144	Egyptian Journal of Schistosomiasis and Infectious and Endemic Diseases	1110-7278
145	Egyptian Journal of Surgery [The]	1110-1121
146	Egyptian Journal of Urology	1110-5712
147	Egyptian Journal of Veterinary Science	1110-0222
148	Egyptian Liver Journal	2090-6218
149	Egyptian Medical Journal of the National Research Center	1687-1278
150	Egyptian Orthodontic Journal	1110-435x
151	Egyptian Orthopaedic Journal [The]	1110-1148
152	Egyptian Pharmaceutical Journal [National Research Center]	1687-4315
153	Egyptian Population and Family Planning Review [The]	1110-1156
154	Egyptian Rheumatologist [The]	1110-1164
155	Egyptian Rheumatology and Rehabilitation	1110-161X
156	Egyptian Science Magazine [The]	1687-3815
157	EJB-Egyptian Journal of Biochemistry and Molecular Biology [The]	1687-1502
158	EJENTAS-Egyptian Journal of ENT and Allied Sciences	2090-0740
159	EJMM-Egyptian Journal of Medical Microbiology [The]	1110-2170
160	EMHJ-Eastern Mediterranean Health Journal	1020-3397
161	EMJ-Egyptian Medical Journal [The]	1110-0095
162	EMJ-Emirates Medical Journal	0250-6882
163	Endovascular Journal	2008-1812
164	Esculapio	2309-3080
165	Feyz-Journal of Kashan University of Medical Sciences	1029-7855
166	Frontiers in Biomedical Technologies	2345-5829
167	FWU Journal of Social Sciences	1995-1272
168	Garyounis Medical Journal	0254-7198
169	Gastroenterology and Hepatology from Bed to Bench	2010-2258
170	Gazette of the Egyptian Paediatric Association [The]	1110-6638
171	Genetics in the 3rd Millennium	1728-6182
172	Gezira Journal of Health Sciences	1810-5386
173	GJMS-Gomal Journal of Medical Sciences	1819-7973
174	GJO-Gulf Journal of Oncology [The]	2078-2101
175	Govaresh	1560-7186

S/N	Journal	ISSN
176	Gulf Journal of Dermatology and Venereology [The]	N/A
177	Gulf Medical University: Proceedings	2306-6865
178	HAKIM Research Journal	1561-252X
179	Hamdard Medicus	0250-7188
180	HAYAT-Journal of Faculty of Nursing and Midwifery [The]	1735-2215
181	Health [The]	2218-3299
182	Health Information Management	1735-7853
183	Health Services Journal of the Eastern Mediterranean Region	1014-9899
184	Heart Views	1995-705X
185	Hematology, Oncology and Stem Cell Therapy	1658-3876
186	Hepatitis Monthly	1735-143X
187	HJMS-Hadramout Journal of Medical Sciences	2224-1806
188	HMJ-Hamdan Medical Journal	2227-2437
189	Homa-ye-Salamat	2008-2002
190	Hormozgan Medical Journal	1735-2223
191	Hospital-Journal of Iranian Scientific Hospital Association	2008-1928
192	IAJD-International Arab Journal of Dentistry	2218-0885
193	IBJ-Iranian Biomedical Journal	1028-852X
194	IDEES-Revue de Perfectionnement Medical et Paramedical	N/A
195	IEJ-Iranian Endodontic Journal	1735-7497
196	IHJ-Iranian Heart Journal	1735-7306
197	IJBC-Iranian Journal of Blood and Cancer	2008-4595
198	IJB-Iranian Journal of Biotechnology	1728-3043
199	IJCBNM-International Journal of Community Based Nursing and Midwifery	2322-2476
200	IJCN-Iranian Journal of Child Neurology	1735-4668
201	IJDO-Iranian Journal of Diabetes and Obesity	2008-6792
202	IJEHSR-International Journal of Endorsing Health Science Research	2307-3748
203	IJEM-Iranian Journal of Endocrinology and Metabolism	1683-4844
204	IJFS-International Journal of Fertility and Sterility	2008-076X
205	IJHOSCR-International Journal of Hematology-Oncology and Stem Cell Research	2008-2207
206	IJHPM-International Journal of Health Policy and Management	N/A
207	IJI-Iranian Journal of Immunology	1735-1383
208	IJKD-Iranian Journal of Kidney Diseases	1735-8582
209	IJMCM-International Journal of Molecular and Cellular Medicine	2251-9637
210	IJME-Iranian Journal of Medical Education	1608-9359

S/N	Journal	ISSN
211	IJM-Iranian Journal of Microbiology	2008-3289
212	IJMS-Iranian Journal of Medical Sciences	0253-0716
213	IJN-Iranian Journal of Neonatology	2251-7510
214	IJOH-International Journal of Occupational Hygiene	2008-5109
215	IJO-Iranian Journal of Orthodontics	1735-5087
216	IJP-International Journal of Pediatrics	2345-5047
217	IJPM-International Journal of Preventive Medicine	2008-7802
218	IJPR-Iranian Journal of Pharmaceutical Research	1735-0328
219	IJRM-Iranian Journal of Reproductive Medicine	1680-6433
220	IJVM-Iranian Journal of Veterinary Medicine	2251-8894
221	IMJ-Iraqi Medical Journal	0304-4564
222	Infectious Diseases Journal of Pakistan	1027-0299
223	International Cardiovascular Research Journal	2251-9130
224	International Journal of Diabetes and Metabolism	1606-7754
225	International Journal of Diabetes Mellitus	1877-5934
226	International Journal of Endocrinology and Metabolism	1726-913X
227	International Journal of Environmental Research	1735-6865
228	International Journal of Environmental Science and Technology	1735-1472
229	International Journal of Health Sciences	1658-3639
230	International Journal of High Risk Behaviors and Addiction	2251-8711
231	International Journal of Mycobacteriology	2212-5531
232	International Journal of Occupational and Environmental Medicine	2008-6520
233	International Journal of Organ Transplantation Medicine	2008-6490
234	International Journal of Pathology	1810-0155
235	International Journal of Radiation Research	2322-3243
236	International Journal of Women's Health and Reproduction Sciences	N/A
237	IOJ-Iraqi Orthodontic Journal	1816-0581
238	IPMJ-Iraqi Postgraduate Medical Journal	1608-8360
239	Iran Journal of Nursing	2008-5923
240	Iran Occupational Health	1735-5133
241	Iranian Journal of Allergy, Asthma and Immunology	1735-1502
242	Iranian Journal of Arthropod-Borne Diseases	1735-7179
243	Iranian Journal of Basic Medical Sciences	2008-3866
244	Iranian Journal of Cancer Prevention	2008-2398
245	Iranian Journal of Dermatology	0021-082X



S/N	Journal	ISSN
246	Iranian Journal of Diabetes and Lipid Disorders	1726-7544
247	Iranian Journal of Environmental Health Science and Engineering	1735-1979
248	Iranian Journal of Epidemiology	1735-7489
249	Iranian Journal of Health and Environment	2008-2029
250	Iranian Journal of Medical Microbiology	1735-8612
251	Iranian Journal of Medical Physics	1735-160X
252	Iranian Journal of Nuclear Medicine	1681-2824
253	Iranian Journal of Nursing and Midwifery Research [IJNMR]	1735-9066
254	Iranian Journal of Nursing Research	1735-7012
255	Iranian Journal of Nutrition Sciences and Food Technology	1735-7756
256	Iranian Journal of Obstetric, Gynecology and Infertility [The]	1680-2993
257	Iranian Journal of Ophthalmology	1735-4153
258	Iranian Journal of Otorhinolaryngology	1560-1293
259	Iranian Journal of Parasitology	1735-7020
260	Iranian Journal of Pediatrics	2008-2142
261	Iranian Journal of Psychiatric Nursing	2345-2501
262	Iranian Journal of Psychiatry	1735-4587
263	Iranian Journal of Psychiatry and Behavioral Sciences	1735-8639
264	Iranian Journal of Psychiatry and Clinical Psychology [IJPCP]	1735-4315
265	Iranian Journal of Public Health	0304-4556
266	Iranian Journal of Radiology	1735-1065
267	Iranian Journal of Veterinary Research	1728-1997
268	Iranian Rehabilitation Journal	1735-3602
269	Iraqi Army Medical Journal	N/A
270	Iraqi Journal of Agriculture	1818-6645
271	Iraqi Journal of Biotechnology	N/A
272	Iraqi Journal of Community Medicine	1684-5382
273	Iraqi Journal of Medical Sciences	1681-6579
274	Iraqi Journal of Microbiology	N/A
275	Iraqi Journal of Pharmaceutical Sciences	1683-3597
276	Iraqi Journal of Tropical Disease Researches	1814-0823
277	IRCMJ-Iranian Red Crescent Medical Journal	1561-4395
278	ISESCO Journal of Science and Technology	2028-8077
279	Isra Medical Journal	2073-8285
280	JABHS-Journal of the Arab Board of Health Specializations	1561-0217

S/N	Journal	ISSN
281	JAMC-Journal of Ayub Medical College-Abbotabad-Pakistan	1025-9589
282	JBMS-Journal of the Bahrain Medical Society	1015-6321
283	JBUMS-Journal of Babol University of Medical Sciences	1561-4107
284	JCPSP-Journal of the College of Physicians and Surgeons Pakistan	1022-386X
285	JCR-Journal of Craniomaxillofacial Research	5489-2345
286	JCVTR-Journal of Cardiovascular and Thoracic Research	2008-5117
287	JDT-Journal of Dentistry Tehran University of Medical Sciences	1735-2150
288	JDUHS-Journal of the Dow University of Health Sciences	1995-2198
289	JEMTAC-Journal of Emergency Medicine, Trauma and Acute Care	1999-7086
290	JESN-Journal of Egyptian Society of Nephrology [The]	N/A
291	JIMDC-Journal of Islamabad Medical and Dental College	2227-3875
292	JISHIM-Journal of the International Society for the History of Islamic Medicine	1303-667X
293	JKCD-Journal of Khyber College of Dentistry	2220-2633
294	JLDA-Journal of the Lebanese Dental Association	1810-9632
295	JLUMHS-Journal of the Liaquat University of Medical Health Sciences	1729-0341
296	JMB-Journal of Medical Bacteriology	2251-8649
297	JMJ-Jamahiriya Medical Journal	2079-1216
298	JMJ-Juba Medical Journal	N/A
299	JMR-Journal of Medical Research	1728-1962
300	JNE-Journal of Nursing Education	3812-2322
301	JNP-Journal of Nephropathology	2251-8363
302	JOPDAK-Journal of the Pakistan Dental Association Karachi	1680-2292
303	Jordan Journal of Pharmaceutical Sciences	1995-7157
304	Jordan Medical Journal	0446-9283
305	Journal du Practicien	1113-5667
306	Journal of Advanced Research	2090-1232
307	Journal of Anesthesiology and Pain	2228-6659
308	Journal of Arak University of Medical Sciences-Rahavard Danesh	1735-5338
309	Journal of Baghdad College of Dentistry	1680-0057
310	Journal of Basic and Applied Sciences	1814-8085
311	Journal of Basic Medical Sciences	N/A
312	Journal of Cardio-Thoracic Medicine	2345-2447
313	Journal of Childhood Studies	2090-0619
314	Journal of Clinical Laboratory [The]	1814-411X
315	Journal of Community Medicine	N/A

S/N	Journal	ISSN
316	Journal of Dental Materials and Techniques	2322-4150
317	Journal of Dental Medicine-Tehran University of Medical Sciences	1024-641X
318	Journal of Dental Research, Dental Clinics, Dental Prospects	2008-210X
319	Journal of Dental School-Shahid Beheshti University of Medical Sciences	1735-7683
320	Journal of Dentistry-Shiraz University of Medical Sciences	1728-3426
321	Journal of Dohuk University	1812-7568
322	Journal of Drug Research of Egypt	0085-2406
323	Journal of Environmental Studies	1025-8620
324	Journal of Epidemiology and Global Health	2210-6006
325	Journal of Family and Community Medicine	2230-8229
326	Journal of Family and Reproductive Health	1735-8949
327	Journal of Fundamentals of Mental Health [The]	1028-6918
328	Journal of Gorgan University of Medical Sciences	1562-4765
329	Journal of Guilan University of Medical Sciences	2008-4048
330	Journal of Health Administration	2008-1200
331	Journal of Health and Safety at Work	2251-807X
332	Journal of Health Promotion Management [JHPM]	2251-8614
333	Journal of Health Scope	2251-8959
334	Journal of Hepatology, Gastroenterology and Infectious Diseases	1110-0796
335	Journal of Hygiene and Health	1735-2363
336	Journal of Infection and Public Health	1876-0341
337	Journal of Injury and Violence Research	2008-2053
338	Journal of Isfahan Dental School	1735-255X
339	Journal of Isfahan Medical School	1027-7595
340	Journal of Islamic Dental Association of Iran [The]-JIDA	1024-6428
341	Journal of Jahrom University of Medical Sciences	2008-7993
342	Journal of Karbala University	1813-0410
343	Journal of Kerman University of Medical Sciences	1023-9510
344	Journal of Kermanshah University of Medical Sciences [KUMS]	2251-9068
345	Journal of King Abdulaziz University-Medical Sciences	1319-1004
346	Journal of Lasers in Medical Sciences	2008-9783
347	Journal of Legal Medicine and Forensic Sciences [The]	1110-6468
348	Journal of Mashhad Dental School	1560-9286
349	Journal of Mazandaran University of Medical Sciences	1735-9260
350	Journal of Medical Council of Islamic Republic of Iran	1562-1073

S/N	Journal	ISSN
351	Journal of Medical Education	1735-3998
352	Journal of Medical Sciences	1997-3438
353	Journal of Medical Sciences	1682-4474
354	Journal of Medicinal Plants	1684-0240
355	Journal of Minimally Invasive Surgical Sciences	2251-7022
356	Journal of Modern Rehabilitation	2008-2576
357	Journal of Nephrology Urology and Transplantation	1606-9331
358	Journal of Nursing and Midwifery Quarterly-Shaheed Beheshti University of Medical Sciences and Health Services	1605-8941
359	Journal of Ophthalmic and Vision Research	2008-2010
360	Journal of Patient Safety and Quality Improvement	2345-4482
361	Journal of Periodontology and Implant Dentistry	2008-7748
362	Journal of Qazvin University of Medical Sciences [The]	1561-3666
363	Journal of Rafsanjan University of Medical Sciences	1735-3165
364	Journal of Rehabilitation	1607-2960
365	Journal of Reproduction and Infertility	2228-5482
366	Journal of Research in Behavioural Sciences	1735-2029
367	Journal of Research in Dental Sciences	2008-4676
368	Journal of Research in Health Sciences [JRHS]	2228-7795
369	Journal of Research in Medical Sciences	1735-5311
370	Journal of Safety Promotion and Injury Prevention	N/A
371	Journal of School of Public Health and Institute of Public Health Research	1735-7586
372	Journal of Screening and Geographical Medicine	1735-7594
373	Journal of Shaheed Sadoughi University of Medical Sciences and Health Services	1562-272X
374	Journal of Shahrekord University of Medical Sciences	1735-1448
375	Journal of Surgery [The]	1681-4517
376	Journal of Taibah University Medical Sciences	1658-3612
377	Journal of Tehran University Heart Center [The]	1735-8620
378	Journal of the Arab Board of Medical Specializations	1561-0217
379	Journal of the Arab Dentist	N/A
380	Journal of the Arab Neonatology Forum	1812-1756
381	Journal of the Arab Society for Medical Research	1687-4293
382	Journal of the Egyptian Medical Association [The]	0013-2411
383	Journal of the Egyptian National Cancer Institute	1110-0362
384	Journal of the Egyptian Public Health Association [The]	0013-2446
385	Journal of the Egyptian Society of Endocrinology, Metabolism and Diabetes [The]	1110-1245

S/N	Journal	ISSN
386	Journal of the Egyptian Society of Obstetrics and Gynecology [The]	0258-3216
387	Journal of the Egyptian Society of Parasitology	1110-0583
388	Journal of the Egyptian Society of Pharmacology and Experimental Therapeutics [The]	N/A
389	Journal of the Egyptian Society of Toxicology	1110-127X
390	Journal of the Faculty of Medicine-Baghdad	0041-9419
391	Journal of the Medical Research Institute-Alexandria University	1110-0133
392	Journal of the Royal Medical Services	2078-8703
393	Journal of the Saudi Heart Association	1016-7315
394	Journal of Tropical Nephro-Urology	N/A
395	Journal of Veterinary Research	2008-2525
396	Journal of Zahedan University of Medical Sciences and Health Services	1735-076X
397	Journal of Zanjan University of Medical Sciences and Health Services	1606-9366
398	JPAD-Journal of Pakistan Association of Dermatologists	1560-9014
399	JPC-Journal of Pediatric Club [The]	N/A
400	JPC-Journal of Pharmaceutical Care	2322-4630
401	JPDA-Journal of the Pakistan Dental Association	1680-2292
402	JPIMS-Journal of Pakistan Institute of Medical Sciences	1683-6928
403	JPMA-Journal of Pakistan Medical Association	0030-9982
404	JPMI-Journal of Postgraduate Medical Institute	1013-5472
405	JPPS-Journal of Pakistan Psychiatric Society	1726-8710
406	JRH-Journal of Research and Health	2251-6395
407	JRMS-Journal of Research in Medical Sciences	1735-1995
408	JRRS-Journal of Research in Rehabilitation Sciences	1735-7519
409	JSOGP-Journal of the Society of Obstetricians and Gynaecologists of Paksitan	N/A
410	JSP-Journal of Surgery Pakistan International	1817-0242
411	Jundishapur Journal of Microbiology [JJM]	2008-3645
412	Jundishapur Journal of Natural Pharmaceutical Products	1735-7780
413	Jundishapur Scientific Medical Journal	2252-052x
414	Kasr El Aini Journal of Surgery	0022-9237
415	Kasr El-Aini Medical Journal	N/A
416	Khartoum Pharmacy Journal	1816-5168
417	Kidney Forum	1369-3050
418	KMJ-Kuwait Medical Journal	0023-5776
419	KMUJ-Khyber Medical University Journal	2072-7763
420	KOOMESH-Journal of Semnan University of Medical Sciences	1608-7046

S/N	Journal	ISSN
421	Kufa Medical Journal	N/A
422	Lahore Journal of Public Health	N/A
423	Lebanese Science Journal	1561-3410
424	Libyan Journal of Infectious Diseases [The]	N/A
425	LJM-Libyan Journal of Medicine	1993-2820
426	LMJ-Lebanese Medical Journal	0023-9852
427	Maghreb Medical	0330-258X
428	Mansoura Journal of Pharmaceutical Sciences	1110-1318
429	Mansoura Medical Bulletin	1012-5590
430	Mansoura Medical Journal	1110-211X
431	Maroc Medical	0253-4053
432	MDV-Molecular Diagnosis and Vaccine	1687-2010
433	MEAJO-Middle East African Journal of Ophthalmology	0974-9233
434	Medical Arabization	N/A
435	Medical Channel	1681-5491
436	Medical Forum Monthly	1029-385X
437	Medical Journal of Ahmed Maher Teaching Hospital [The]	N/A
438	Medical Journal of Basrah University [The]	0253-0759
439	Medical Journal of Cairo University [The]	0045-3803
440	Medical Journal of Islamic World Academy of Sciences	1016-3360
441	Medical Journal of Mashad University of Medical Sciences	1735-4013
442	Medical Journal of Tabriz University of Medical Sciences and Health Services	1608-5671
443	Medical Journal of Teaching Hospitals and Institutes [The]	1110-2039
444	Medical Journal of the Islamic Republic of Iran	1016-1430
445	Medical Journal of Tikrit University [The]	N/A
446	Medical Laboratory Journal	1735-9007
447	Medical Principles and Practice	1011-7571
448	Medical Sciences Journal of Islamic Azad University	1023-5922
449	Medical Spectrum [The]	0254-8534
450	Medical-Surgical Nursing Journal	2322-178X
451	Medicine Today	1813-9876
452	MEJC-Middle East Journal of Cancer	2008-6709
453	Middle East Journal of Anesthesiology	0544-0440
454	Middle East Journal of Digestive Diseases	2008-5230
455	Middle East Journal of Family Medicine	N/A

S/N	Journal	ISSN
456	Minoufia Medical Journal	1110-2098
457	MJFCT-Mansoura Journal of Forensic Medicine and Clinical Toxicology	1110-5437
458	Modares Journal of Medical Sciences, Pathobiology	1562-9554
459	Mother and Child	0379-2617
460	Neonatology	1687-0492
461	Nephro-Urology Monthly	2251-7006
462	Neurosciences	1319-6138
463	New Egyptian Journal of Medicine [The]	1110-1946
464	New Iraqi Journal of Medicine [The]	1817-5562
465	Novelty in Biomedicine	2345-3346
466	Nursing and Midwifery Research	1753-5001
467	Ofogh-E-Danesh	1735-1855
468	Oman Journal of Ophthalmology	0974-620X
469	Oman Medical Journal	1999-768X
470	Omdurman Journal of Pharmaceutical Sciences	N/A
471	PAFMJ-Pakistan Armed Forces Medical Journal	0030-9648
472	Pakistan Heart Journal	0048-2706
473	Pakistan Journal of Biochemistry	0300-8185
474	Pakistan Journal of Chest Medicine	N/A
475	Pakistan Journal of Clinical Psychology	1019-438X
476	Pakistan Journal of Community Medicine [The]	N/A
477	Pakistan Journal of Health	0030-9834
478	Pakistan Journal of Medical and Health Sciences	1996-7195
479	Pakistan Journal of Medical Ethics	N/A
480	Pakistan Journal of Medical Sciences	1682-024X
481	Pakistan Journal of Neurological Sciences	1990-6269
482	Pakistan Journal of Neurology	1990-6269
483	Pakistan Journal of Obstetrics and Gynaecology	N/A
484	Pakistan Journal of Orthodontics, Pediatric and Community Dentistry	1608-134X
485	Pakistan Journal of Otolaryngology-Head and Neck Surgery	0257-4985
486	Pakistan Journal of Pathology	1024-6193
487	Pakistan Journal of Pharmaceutical Sciences	1011-601X
488	Pakistan Journal of Pharmacology	0255-7088
489	Pakistan Journal of Physiology	1819-270X
490	Pakistan Journal of Psychology	0030-9869

S/N	Journal	ISSN
491	Pakistan Journal of Scientific and Industrial Research	0030-9885
492	Pakistan Journal of Scientific and Industrial Research Series A: Physical Sciences	2221-6413
493	Pakistan Journal of Scientific and Industrial Research Series B: Biological Sciences	2221-6421
494	Pakistan Medical Journal	0031-000X
495	Pakistan Ophthalmology	0259-3661
496	Pakistan Oral and Dental Journal	1012-8700
497	Pakistan Pediatric Journal	0304-4904
498	Pan Arab Journal of Neurosurgery	1319-6995
499	Pan Arab Journal of Orthopaedic and Trauma [The]	1607-4912
500	Pan Arab Medical Journal	N/A
501	Payavard-Salamat	1735-8132
502	Payesh-Health Monitor	1680-7626
503	Pejouhandeh: Bimonthly Research Journal	1735-1022
504	PJC-Pakistan Journal of Cardiology	1016-1244
505	PJMR-Pakistan Journal of Medical Research	0030-9842
506	PJO-Pakistan Journal of Ophthalmology	0886-3067
507	PJPH-Pakistan Journal of Public Health	2225-0891
508	PJS-Pakistan Journal of Surgery	0258-8552
509	PMJ-Palestinian Medical Journal	N/A
510	POJ-Pakistan Orthodontic Journal	2074-0069
511	Population Bulletin of ESCWA	0258-1914
512	Population Researches and Studies	0255-898X
513	Population Sciences	N/A
514	Population Studies	1110-1342
515	Proceedings-Shaikh Zayed Postgraduate Medical Institute	N/A
516	Professional Medical Journal-Quarterly [The]	1024-8919
517	PUJ-Parasitologists United Journal	1687-7942
518	Qatar Medical Journal	0253-8253
519	Qom University of Medical Sciences Journal	1735-7799
520	Quarterly Journal of Medical Ethics	2008-4374
521	Quarterly Journal of Medical Law	N/A
522	Quarterly Journal of Sabzevar University of Medical Sciences	1606-7487
523	Quarterly Scientific Journal of Relief and Rescue	2008-4544
524	Razi Journal of Medical Sciences	2228-7043
525	Rehabilitation International	N/A



S/N	Journal	ISSN
526	Research Centre Bulletin	1019-5335
527	Research in Cardiovascular Medicine	2251-9572
528	Research Journal of Aleppo University-Medical Sciences Series	N/A
529	Revue Maghrebine de Pediatrie [La]	0330-7611
530	Revue Maghrebine d'Endocrinologie-Diabete et de Reproduction [La]	N/A
531	Revue Marocaine de Chirurgie Orthopedique et Traumatologique	N/A
532	Revue Marocaine de Medecine et Sante	0251-0758
533	Revue Marocaine des Maladies de L'Enfant	N/A
534	Revue Tunisienne d'Infectiologie	1737-8958
535	Risafa Medical Journal	N/A
536	RMJ-Rawal Medical Journal	0303-5212
537	RMM-Research in Molecular Medicine	2322-1348
538	Salmand-Iranian Journal of Aging	1735-806X
539	Sana'a University Journal of Medical Sciences	1993-3584
540	Saudi Epidemiology Bulletin	1319-3965
541	Saudi Heart Journal	1018-077X
542	Saudi Journal of Disability and Rehabilitation	1319-6499
543	Saudi Journal of Gastroenterology [The]	1319-3767
544	Saudi Journal of Oto-Rhino-Laryngology Head and Neck Surgery [The]	1319-8491
545	Saudi Journal of Sports Medicine [The]	1319-6308
546	Saudi Medical Journal	0379-5284
547	Scientific and Research Journal of Army University of Medical Sciences-JAUMS	1727-1789
548	Scientific Journal of Al-Azhar Medical Faculty [Girls] [The]	1110-2381
549	Scientific Journal of El-Minia Faculty of Medicine [The]	1110-2446
550	Scientific Journal of Forensic Medicine	1027-1457
551	Scientific Journal of Iranian Blood Transfusion Organization [The]	1027-9520
552	Scientific Journal of Kurdistan University of Medical Sciences	1560-652X
553	Scientific Medical Journal	1110-5607
554	Scientific Nursing Journal	1812-2388
555	SDJ-Saudi Dental Journal [The]	1013-9052
556	SGH Medical Journal	1658-2489
557	SJA-Saudi Journal of Anaesthesia	1658-354X
558	SJO-Saudi Journal of Ophthalmology	1319-4534
559	SJPH-Sudanese Journal of Public Health	1990-7567
560	Smile Dental Journal	2072-473X

S/N	Journal	ISSN
561	Social Welfare Quarterly	1735-8191
562	Sohag Medical Journal	1110-7529
563	South Valley Medical Journal	1110-7529
564	SPJ-Saudi Pharmaceutical Journal	1319-0164
565	SQUMJ-Sultan Qaboos University Medical Journal	2075-051X
566	SST-Sante et Securite au Travail	N/A
567	Strides in Development of Medical Education	1735-4242
568	Sudan Journal of Medical Sciences	1858-5051
569	Sudan Medical Journal	0491-4481
570	Sudan Medical Monitor	1858-5000
571	Sudanese Journal of Dermatology	1815-3941
572	Suez Canal University Medical Journal	1110-6999
573	Tabib Attifil Alarabi	N/A
574	Tanaffos	1735-0344
575	Tanta Medical Journal	1110-1415
576	Tanta Medical Sciences Journal	1687-5788
577	Teb Va Tazkie	1608-2397
578	Tehran University Medical Journal [TUMJ]	1683-1764
579	Thrita Student Journal of Medical Sciences	2251-8312
580	Toloo-e-Behdasht	1728-5127
581	Trauma Monthly	2251-7464
582	Tunisie Medicale [La]	0041-4131
583	University of Aden Journal of Natural and Applied Sciences	1606-8947
584	Urology Annals	0974-7796
585	Urology Journal	1735-1308
586	Veterinary Medical Journal	1110-1423
587	WJPS-World Journal of Plastic Surgery	2228-7914
588	Yafteh Journal	1563-0773
589	Yemeni Journal for Medical Sciences [The]	N/A
590	YHMRJ-Yemeni Health and Medical Research Journal	N/A
591	YJMRH-Yemeni Journal of Medical and Health Research	N/A
592	YMJ-Yemen Medical Journal	N/A
593	Zagazig Journal of Forensic Medicine and Toxicology	1687-160X
594	Zagazig Journal of Pharmaceutical Sciences	1110-5089
595	Zagazig Medical Association Journal	1110-2322

S/N	Journal	ISSN
596	Zagazig University Medical Journal	1110-1431
597	Zahedan Journal of Research in Medical Sciences	N/A
598	Zanco Journal of Medical Sciences	1995-5588

**Last update December 2015**