Responses to Stress in Health and Disease

Dr. Darakhshan Jabeen Haleem (Meritorious Professor)
Neuroscience Laboratory, Dr Panjwani Center for Molecular Medicine & Drug Research, University of Karachi

It was nineteenth century scientist ‘Claude Bernard’ who first realized the importance of stress responses and proposed that body reacts to increased demand imposed on it by exposing to a stress inducing situation. That exposure to a stress inducing situation increases circulating levels of epinephrine and norepinephrine was shown by ‘Cannon’ in 1914. Later, it was demonstrated by ‘Selye’ in 1936 that stress exposure activates hypothalamo pituitary adrenocortical (H-PA) axis to increase circulating levels of glucocorticoids. A necessity of both of these physiological responses in coping/ survival to stress was shown in 1968 by Michael and colleagues. They showed that adrenalectomy decreased survival time in rats exposed to cold stress, while blocking the action of epinephrine and norepinephrine in adrenalectomized rats exposed to cold stress further reduced survival time and the animals died in 2-3 h. Stress exposure therefore tends to initiate coping responses to face extra demand imposed on an organism. On the other hand, chronic and uncontrollable stress impairs coping responses to lead to depression and other stress related disorders. A number of studies show that stress perception is greater in women than men; and is the cause of greater prevalence of depression in women than men. Coping responses to an acute stressor are better in women than men but repeated or chronic stress impairs adaptation in them to lead to depression, anxiety and anorexia nervosa. A role of H-PA axis in the gender differences of adaptation to stress has been also documented. Thus exposure to a stress-inducing situation increases circulating levels of glucocorticoids more in female than males. Stress exposure also increases firing of neurons in the brain. Most studies on stress have focused on the modulation of serotonin neurotransmission because the transmitter amine is deficient in depression and drugs that increase serotonin neurotransmission are antidepressants. Although inability to accommodate stress may lead to depression but mild stress that initiates adaptive process in the body is necessary for health and better performance. Thus physical exercise, which is regarded to initiate stress like reactions in the body, is necessary for healthy life. Moreover, mild-moderate stress has been shown to improve performance in students, while tranquil students were not able to perform better in examination. Studies suggest that mild-moderate stress initiates adaption in healthy individuals to help them to cope a severe/ uncontrollable stress and prevent from stress-related disorders.

Writing Scientific Papers and Publications-Showcasing the Scientific Talent to the World

Prof. Dr. Muhammad Iqbal Choudhary H.I., S.I., T.I.
Distinguished National Professor/ Director
International Center for Chemical and Biological Sciences (H. E. J. Research Institute of Chemistry, Dr. Panjwani Center for Molecular Medicine and Drug Research,) University of Karachi.

Science is a world of wonders, often more exciting than the fiction. Scientific enterprise involves numerous careful and tedious experiments which lead to blockbuster and ground breaking discoveries. To showcase the impact of these discoveries, the scientific results must be communicated to others in the form of research publications. Writing research papers is the best way to communicate the scientific findings. Writing and publishing scientific manuscript is as important as conducting research. In today’s scientific world, quality of research and excellence of a scientist is measured from where the research results are published. Similarly the status of science and technology of any country is measured from the number of scientific papers and patents published by its scientists, every year. For example in 2012, Pakistani scientists have published over 8000 international papers versus 50,000 by Indian researchers. Similarly quality and number of scientific publications and patents determine the scientific status of researcher at individual level. World of bibliometry is largely based on impact factors of journals, citations and h- and g-indices. It is therefore important that scientific papers should be written in such a manner that they depict the author’s excitement and enthusiasm towards particular research study. Research papers are basically the documentation of important scientific problems, their solutions, investigation approach and above all the scientific discoveries. During this presentation, importance of scientific publications, both research based manuscripts and patents, will be highlighted along with essential components of a scientific publications and skills to write a good manuscript for high impact factor journals.
The cancer research can be broadly divided into three areas, namely diagnostic, prognostic and therapeutic. The main focus of cancer research which has flourished the research area of cancer research in the last decade is epigenetics. Nevertheless growing evidence point on the importance to understand the mechanisms by which epigenetic changes regulate the genesis and progression of cancer growth. Several epigenetic targets have been discovered and are currently under validation for new anticancer therapies. Major area of cancer research is drug discovery approaches aiming to target these epigenetic enzymes with small-molecules inhibitors have produced the first pre-clinical and clinical outcomes and many other compounds are now entering the pipeline as new candidate for drugs. By acknowledging that the field of cancer epigenetics is evolving with an impressive rate of new findings, which is providing the overview of pre-clinical applications of small-molecules for cancer pathologies, combining them with the current knowledge of epigenetic targets in terms of available structural data and drug design perspectives.

**ABSTRACTS FOR ORAL PRESENTATIONS**

01 **Health Science Research; Problematising Health Science Research**

Kausar S. Khan, Community Health Sciences Dept; Aga Khan University, Karachi

What is the relationship between health research and people’s health? What drives research --search for knowledge or concerns for health problems?. Such concerns are often ignored by researchers and their institutions. Do health science researchers have a social obligation? Or, does health science research has a social obligation. Furthermore, what is the difference between a researcher and research? While the latter cannot exist without the former, the former could be determined by how his/her institution interprets health science research. Recall the role of Nazi and Japanese researchers in the World War II period. They sought knowledge at the expense of human beings they dominated. Research so generated has been rejected for use on ethical grounds. This rejection carries a strong message often ignored by researchers and the institutions they inhabit. How is health science research to give meaning to itself? What drives it when life has become more and more complex as health inequities keep increasing; health systems continue to be non-functional; and health science research continues to be limited to the positivist research paradigm. The constructivist approach in social sciences is a meaning making approach. Can health science research take a constructivist approach to give meaningful to itself? Can it identify the primary source of its meaning - ‘health’ of life, or producing knowledge as an end? This paper outlines the constructivist approach to learning and research, and examines the role of researcher and research institutions. The paper problematizes the issues rather than offer solutions.

02 **Effect of Centratherum Anthelminticum On Post-Prandial Blood Glucose Level In Male Albino Rabbits.**

Hina A. Mudassir and Shamim A. Qureshi, Department of Biochemistry, Federal Urdu University of Arts, Science and Technology, Karachi & Department of Biochemistry, University of Karachi, Karachi, Pakistan.

The objective of the present study was to investigate the hypoglycemic activity, post prandial blood glucose level and glucose tolerance along with the phytochemicals of aqueous (AqSEt) and ethanolic (ESEt) seed extracts of *Centratherum anethelminticum*, in different groups of male albino rabbits (3/group). AqSEt and ESEt were used for the qualitative and quantitative phytochemical analysis, its acute toxicity (from 500-3000 mg/kg) and hypoglycemic effect along with oral glucose tolerance tests (OGTT) at 200, 400, and 600 mg/kg in test and control groups. Orally administrated AqSEt and ESEt was found non-toxic, non-sedative and showed hypoglycemic activity. In OGTT, ESEt of *Canthelminicum* produced a significant decrease (P<0.05) in blood glucose level after 30 min @ 200 and 600 mg/kg and after 120 min @ 400 mg/kg as compared to control. AqSEt of *Canthelminicum* @ 200 mg/kg also decreased blood glucose level after 0, 30 and 60 min as compared to their control. The phytochemical analysis showed the presence of alkaloids, flavonoids, carbohydrates, gallotannins, glycosides, saponins and steroids in both AqSEt and ESEt of *Canthelminicum* would be an effective hypoglycemic agent, have potential value for the development of a potent phytotherapy for diabetes, though further pharmacological investigations are needed to elucidate the exact mechanism of action.

03 **Glycemic Improvement by Methanolic Root Extract of Rauwolfia serpentina In High Fructose Fed Type 2 Diabetic Mice**

Muhammad Bilal Azmi and Shamim A. Qureshi

The main focus of cancer research which has flourished the research area of cancer research in the last decade is epigenetics. Nevertheless growing evidence point on the importance to understand the mechanisms by which epigenetic changes regulate the genesis and progression of cancer growth. Several epigenetic targets have been discovered and are currently under validation for new anticancer therapies. Major area of cancer research is drug discovery approaches aiming to target these epigenetic enzymes with small-molecules inhibitors have produced the first pre-clinical and clinical outcomes and many other compounds are now entering the pipeline as new candidate for drugs. By acknowledging that the field of cancer epigenetics is evolving with an impressive rate of new findings, which is providing the overview of pre-clinical applications of small-molecules for cancer pathologies, combining them with the current knowledge of epigenetic targets in terms of available structural data and drug design perspectives.
04 Seasonal Effects on Water And Osmotically-Active Ionic Contents (Na\(^+\), K\(^+\) & Cl\(^-\)) Of Skeletal Muscles Of The Spiny-Tailed Lizard, **Uromastix Hardwickii**.

Mohammad Saleh Soomro\(^1\), Muhammad Abdul Azeem\(^2\), Rehana Rehman\(^3\), and Mohammad Naeem Soomro\(^3\).

\(^1\)Department of Physiology Liaquat National Medical College Karachi, \(^2\)Department of Physiology Deewan Medical College Karachi, formerly chairman Dept of Physiology University of Karachi, \(^3\)Department of Physiology Bahria University Medical & Dental College Karachi, and \(^4\)PG student Civil Dept. NED University Karachi.

**Objective:** To assess the seasonal effects of water & osmotically-active ionic contents (Na\(^+\), K\(^+\) & Cl\(^-\)) of skeletal muscles of the spiny-tailed lizard **Uromastix hardwickii**.**Methods:** Fresh animals (adults) of both the sexes were used in all the experiments, and the gastrocnemius (skeletal) muscles were dissected out, reptilian buffer solution was used to keep disected muscles moist & use during experimentation. The muscle sample solutions were prepared by heating/drying and incubering/ashting the muscle tissues, treating with acide and deionized water respectively. These samples were then used for the estimation of Na\(^+\), K\(^+\) & Cl\(^-\) ions. The water content was found as percent wet muscle weight.**Results:** The average mean values of water content and these osmotically active ionic contents were found to fall significantly (P<0.05) from peak winter towards peak summer & vice versa. **Conclusion:** The seasonal effects of these parameters, studied for the first time in the skeletal muscle of **Uromastix hardwickii**, displayed changes as the animal passed from one seasonal phase to another. Hence seasonal changes are invariably associated with changes in environmental temperature, and definitely responsible to change the active behaviour and homeostasis of these animals from summer towards winter by variations in blood borne hormonal and hormonal substances along with significant changes in osmolarity and tissue water contents.**Keywords:** Uromastix hardwickii, osmolality, environmental temperature, aclimatization, electrolyte & water balance.

05 Study of effects of lactation on plasma metastin levels in human females

Saira Wagan, Department of Animal Sciences, Laboratory of Neuro endocrinology, Quaid-i-Azam University, Islamabad

**Introduction** Lactation results in negative energy balance and suppression of hypothalamic-pituitary-gonadal axis. Lactation decreases GnRH pulsatility by altering stimulatory tone to the GnRH neurons. Kisspeptin is a key regulator of reproduction through stimulation of gonadotropin releasing hormone. Recently, reduced kiss1 expression in the hypothalamus has been related to lactational suppression of GnRH release in rodents. However, no data are available on the peripheral levels of metastin (the endogenous product of kiss1) during lactation in any species. **Purpose of study** Present study was carried out to measure metastin in peripheral circulation during lactation in human females.**Methodology** Blood samples were collected from healthy lactating women of similar ages which were divided into four lactational stages as puerperium (G1; 1st day of fetal birth to day 40), early lactational stage (G2; day 41 to 6th month post-delivery), mid lactational stage (G3; 7 to 12th month post-delivery) and late lactational stage (G4; 13 to 18th month post-delivery) (n=10/stage). A control group consisted of age and BMI matched healthy non-lactating women (n=8). Plasma was extracted and quantitative measurements of metastin in extracted samples were done by using a commercial enzyme immunoassay (EIA).**Results** The metastin-like immunoreactivity was detectable in all groups. Plasma metastin-like IR was reduced with onset of lactation with minimal levels being observed in G3 group. G3 metastin-like IR was significantly low (P< 0.05) as compared to levels in non-lactating control. The levels were also comparatively lower in early and late stages of lactation. However, differences were not significant when compared to controls. **Conclusion** The present study demonstrated reduced peripheral metastin levels during lactation in women, suggesting a possible involvement of circulating metastin in contribution to suppression of reproductive axis during lactation.

06 Biosimilars---- A unique but complex approach in Pharmaceutical technology

Almas Altaf, Faculty of Pharmacy, Jinnah University for Women, KHI, Pakistan & Aysa Khattak Faculty of Pharmacy, Jinnah University for Women, KHI, Pakistan.
**07 Implicating Apomorphine for The Treatment Of Stress-Induced Depression**

**Huma Ikram** 1*, Darakhshan J. Haleem 2

1Neuro chemistry and Biochemical Neuro pharmacology Research Unit, Department of Biochemistry, University of Karachi, Karachi-75270, Pakistan.
2Neuroscience Research Laboratory, Dr. Panjwani Center for Molecular Medicine and Drug Research, University of Karachi, Karachi-75270, Pakistan.

An important role of 5-hydroxy tryptamine (5-HT; serotonin) 1A receptors is there in the pathophysiology of depression as well as addiction. A supersensitivity of these receptors may impair adaptation to stress and lead to depression. Whereas, a desensitization of these receptors is suggested to be helpful for adaptation to stress and attenuation of addiction. Present study was designed to monitor apomorphine-induced behavioral sensitization in rats exposed to restraint stress. Experiment was carried out in two phases and apomorphine was experienced during restraint stress in phase I, but was not experienced during restraint stress in phase II. Activities in novel and familiar environments, as well as daily food intakes were recorded. Present study revealed that apomorphine-induced sensitization was greater in animals which experienced apomorphine during restraint stress. However, animals which did not experience apomorphine during restraint stress, apomorphine-induced sensitization was attenuated. Apomorphine potentiated adaptation to repeated restraint stress if experienced after restraint stress, but not before it. The study therefore suggests that apomorphine and other psychostimulants could be used for the treatment but not for the prevention of stress-induced depression. **Key words:** Apomorphine, Stress, Learned Helplessness, Serotonin, Anxiety, Sensitization

**08 Health Risk Assessment of Heavy Metals in Urban Soil of Karachi, Pakistan**

*Zahida Karim* 1 and Bilal Aslam Qureshi, Department of Chemistry, University of Karachi, 75270, Pakistan.

The potential health risk due to lifetime exposure to copper, lead, chromium, zinc and iron in urban soil of Karachi was evaluated. Mean concentrations of Cu, Pb, Cr, Zn and Fe in topsoil samples were 33.26±12.84, 42.1±55.8, 9.58±4.18, 99.52±37.19 and 908.4±57.8 mg kg⁻¹, respectively. USEPA model was adopted for the carcinogenic and non-carcinogenic risk assessment from different exposure pathways. Risk assessment indicated that the overall results for the carcinogenic risk were insignificant, i.e., Risk₉₉ga (6.35×10⁻⁷) > Riskᵣᵦᵢ (3.67×10⁻³) > Riskᵣᵣᵰ (1.86×10⁻⁵). It was noticed that Pb and Cr are contributed to the overall cancer risks of heavy metals in urban soil of Karachi city. The carcinogenic risk from Pb due to oral ingestion of soil exceeded the value of 1×10⁻⁶, in some areas of the city. It indicates that the exposure to Pb contaminated soil may cause adverse health effects in human, especially in children. Hazard quotient (HQ) for different metals through ingestion and dermal pathways were also found lower than 1. The combined Hazard index (HI) for children through different routes of exposure was 8.9 times higher than for adults. It indicates that the children are more susceptible to non-carcinogenic health effects of trace metals compared to adults. Particularly, non-carcinogenic risk of Pb to children via oral ingestion needs special attention.

**09 Evaluation of Sub-Clinical Thyroid Disease in Adult Patients.**
Background: Sub-clinical or “Mild” thyroid disease, a common disorder, particularly in middle-aged and elderly individuals. Both sub-clinical hypothyroidism and hyperthyroidism are diagnosed based on laboratory evaluation with few if any clinical signs or symptoms. Sub-clinical hypothyroidism is defined as an elevation in serum TSH above upper limit of the reference range with normal serum FT4 concentration; sub-clinical hyperthyroidism is defined as a decrease in serum TSH below the reference range with normal serum FT3 and T3 concentration. It is reported that most patients who found to have sub-clinical thyroid disease have TSH values between 0.1 and 0.45 mIU/L or between 4.5 and 10 mIU/L (normal reference range 0.45mIU/L – 4.5mIU/L). Methods: We present here studies carried out during Dec 2002-Dec 2008 in 210 patients (88 males, 122 females) regarding evaluation of sub-clinical thyroid disease. Their TSH, T3 T4, FT3 and FT4 levels were determined by using 3rd generation Chemiluminescence technology on Elesys 2010 analyzer. Data is cumulated and presented as percent occurrence. Results and Conclusion: In female groups of 122 patients, 21 (17.21%) exhibited sub-clinical thyroid disorders [n = 13; 10.65% Sub-clinical hypothyroidism, n = 8; 6.55% sub-clinical hyperthyroidism], whereas 43 (35.24%) exhibited true-thyroid disease. Furthermore in male group of 88 patients; 9 patients (11.25%) showed sub-clinical thyroid disorders [n = 8; 10% sub-clinical hypothyroidism; n = 1; 1.2% sub-clinical hyperthyroidism], whereas 18 (22.5%) exhibited true-form. It is concluded that sub-clinical thyroid dysfunction predicts future progression to overt disease. It is also advisable that routine screening for thyroid disease through clinical investigations aided with lab findings be promoted, especially in pregnant women.

10 Withania coagulans Improves Coronary Risk Index in High-Fat Diet Induced Hyperlipidemic Rabbits

Tooba Lateef1,2 and Shamim A. Qureshi1
1Department of Biochemistry, University of Karachi, Karachi-75270, Pakistan
2Department of Biochemistry, Jinnah University for Women, Karachi-74600, Pakistan

Purpose of Study: To evaluate the effect of methanolic fruit extract (MFEt) of Withania coagulans on lipid profile and coronary risk index in high-fat diet (HFD) induced hyperlipidemic animal model. Introduction: Excessive dietary lipids and high levels of cholesterol particularly total cholesterol (TC), triglycerides (TG) and low density lipoprotein (LDL-c) are the major factors responsible for the onset of hyperlipidemia leading to coronary heart disease, the most common cause of mortality and morbidity worldwide. As it is found that known lipid lowering drugs have many side effects, researchers are showing keen interest in natural products. Methodology: MFEt of W. coagulans (family: Solanaceae) was prepared through rotary vacuum evaporator. The experimental rabbit were divided into four control groups including control (distilled water 1 ml), HFD control (distilled water 1 ml), HFD negative control (0.05% DMSO 1 ml) and HFD positive control (simvastatin 20 mg/kg), and three test groups (MFEt 200, 400 and 600 mg/kg) consecutively for 14 days. On completion of trial rabbits were sacrificed to collect blood and serum was separated to estimate lipid profile including TC, TG and High density lipoprotein (HDL-c) by using Randox kit. Whereas LDL-c and coronary risk index (CRI) were calculated by formulae. Result: The MFEt showed significant increase in HDL-c and decrease in TC, TG and LDL-c (<0.05) when compared with HFD induced hyperlipidemic control groups. In addition CRI was also improved. Conclusion: The results demonstrate that MFEt of W. coagulans showed improvement in CRI in HFD induced hyperlipidemic rabbits. Keywords: Coronary risk index, high-fat diet, coronary heart disease, cholesterol, triglycerides.

11 Frequency of Sickle-Cell Hemoglobin (HbS) and Hepatitis-C Virus (HCV) in Beta Thalassaemic and their association with gender; A retrospective analysis of reported cases since 1988.

Muhammad Salman H. Qureshi, Bakhtawar Qureshi, Asif, Malhoob Jan, Jafar Khan
Peshawar Medical College.

Introduction: The adult hemoglobin is composed of alpha and beta chains. The defect in beta chain results in a condition known as Beta Thalassemia. Sufferers of this disease require regular blood transfusion, the denial of which can lead to life threatening conditions. Due to frequent and life long blood transfusions, these patients are at greater risk of acquiring other infectious diseases including HbS, HCV & HIV. Purpose Of Study: To determine the frequency of Sickle-Cell Hemoglobin (HbS) and Hepatitis-C Virus (HCV) in Thalassemic patients undergoing blood transfusion in a non-profit blood donating organization in Peshawar. To find the association of gender with positive cases of HbS and HCV. To determine the frequency of deaths reported in thalassemic patients suffering from HbS & HCV. Methodology: A descriptive study was performed in the Fatmid blood donating foundation, Peshawar. All the HbS & HCV positive cases of “regular” Thalassemic patients reported since 1988 were recorded and taken under consideration for data analysis. The data was collected from the “Thalassemia Reactive Patient’s Report”, which was obtained from the record cell of Fatmid Foundation. Ethical consideration regarding confidentiality of patients was taken in account. The study duration was about 20 days. Results: After analyzing the data it was revealed that out of more than 1500 regular beta thalassaemic patients, 92 patients were affected either with HbS or HCV. Among these 92 patients, 5 were affected with HbS and 86 were found HCV positive while one patient was found to be HbS positive as well as HCV positive. The frequency of positive cases was 20% more in males (n=55) as compared to the females (n=37). Out of 92 patients, 22 deaths (n=22, M:16 & F:6) were reported. No “regular” living patient above the age of 25 years was found on record. Conclusion: About 6 percent of total thalassaemic patients were HbS or HCV positive. The frequency of
HCV was 17 times more than that of HbS. Majority of the positive cases were associated with males as compared to the females. Almost quarter of total subjects eventually died of their diseases.

12 Isolation, identification and drug susceptibility profile of Candida sp. From Gastroduodenal pathology patients in Islamabad-Pakistan
Sikander Khan Sherwani 1,2, Muhammad Umar 1, Faisal Rasheed1, Syed Habib Bokhari 3 and Shahana U. Kazmi1
1 Immunology and Infectious Disease Research Laboratory (IIDRL)-Department of Microbiology-University of Karachi-Pakistan, 2 Department of Microbiology-Federal Urdu University University of Arts, Science and Technology-Karachi Pakistan, 3 Holy Family Hospital, Rawalpindi Medical College-Rawalpindi-Pakistan, 4 BreathMAT Lab-NORI Hospital-Islamabad-Pakistan, 5 Department of Biosciences-COMSATS Institute of Information Technology-Islamabad-Pakistan.

Introduction: Candida is regarded as a part of the normal micro flora of the alimentary tract and mucocutaneous membrane of healthy host. Nonetheless, even the slightest alteration in the physiological state turns normally harmless commensal yeast into aggressive pathogen. Likelihood, it has some nature of clinical associations with other pathogens as reported in a couple of studies with H. pylori causing mucosal damage and even life threatening systemic infections. Methods: In this study, 150 gastric biopsies along with clinical history of patients were collected from gastroduodenal pathology patients referred for endoscopy of Holy Family Hospital-Islamabad –Pakistan for the assessment of H. pylori and Candida albicans. All the candida albicans isolates were identified by conventional means and anticanidal susceptibility were also carried out by Kirby Bauer Disk Diffusion methods against four conventionally employed antifungal antibiotics (Amphotericin B, fluconazole, ketoconazole and nystatin). More over, Minimum inhibitory Concentration (MIC) and Minimum Fungicidal concentration (MFC) were also determined by Microbroth dilution method. Results: In this study, out of 150 patients of gastroduodenal pathology, 96/150 (61.3%) H. pylori positive were found positive. However, 46/150 (30.6) were full blown clinical candidiasis cases were observed and from 38/46 (82%), Candida sp. were successfully recovered by culturing on Sabouraud Dextrose Agar and Corn meal Agar identified by Germ Tube Formation (GT), Clamydospore Formation Test (CT) and sugar assimilation and fermentation test. Culturing on CHROMAGAR results indicate that 24/38 (63.1%) Candida albicans, 6/38 (15.7%) Candida galbrata, 5/38 (13.1%) Candida tropicalis, 3/38(7.8%) Candida krusei. All isolates of Candida albicans and non Candida albicans (100%) were found susceptible with Amphotericin B, however, 11/24 of Candida albicans were resistant to Nystatin, 8/24 of Candida albicans were found resistant with Fluconazole. Candida galbrata and Candida tropicalis did not show very high resistance. All Candida krusei were found resistant to fluconazole.MIC of all the tested antifungal antibiotic were found in the range of 8-32microgram/ml. Conclusion: Candida sp. being an opportunistic pathogens get n access in various anatomic sites of the body like in this study isolated from the gastrointestinal tract and upon biopsy processing along with H.pylori. In addition to this various species also found resistant with antifungal antibiotics which poses problem in therapeutic management of mycotic infection.

13 Comparative Effects of Caffeine & L-Theanine on Subjective Cardiovascular Signs
Department of Physiology, University of Karachi.

Purpose of study: Present study is conducted to evaluate the relative effects of regular based intake of regular cold and hot non-alcoholic beverages on subjective cardiovascular parameters. Introduction: Non-alcoholic beverages comprise of Caffeine and L-theanine as core ingredients. Caffeine is attributed to augment subjective cardiovascular signs by enhancing the neurotransmission of epinephrine and norepinephrine selectively after binding with adenosine receptors antagonistically. L-theanine, as a constituent of green tea and classified as generally recognized as safe ingredient by FDA is helpful in lowering blood pressure by antagonizing the effects of excitatory neurotransmitters after subsequent release of inhibitory neurotransmitter GABA. Methodology: 47 healthy females with age 18-19 years, participated in the study voluntarily. Later on, they were divided into different categories. Category 1 was subjected to consume cold beverage (soft drink). Participants accommodated into Category 2 and 3 were allowed to take hot beverages in the form of tea and green tea respectively. Cardiovascular parameters (blood pressure, heart rate & pulse rate) were assessed before and after 45 minutes of beverages intake.Results: Analysis of the data with statistical tools reveals a remarkable increase in HR (by 8 and 1bpm) and PR (by 6 & 1bpm) among participants that were placed in category 1 by and 2 respectively, but only the participants of category 3 were evaluated with tremendous decrease in PR (by 10bpm). A significant reduction in both systolic & diastolic blood pressure was evident with category 3 participants (by 19 & 12mm Hg) as compared to category 1 and 2 individuals. Conclusion: Study is conducted purely to investigate the concomitant effects of everyday beverages over physiological responses along with human body homeostatic adjustments. Experimental results are unveiling effectiveness of L-theanine (green tea) in lowering BP, HR & PR after antagonizing the release of excitatory neurotransmitter along with the opening of ligand gated chloride channels that leads to hyperpolarization. Moreover, Caffeine (tea & soft drink) is subjected for physiological rise in HR & BP, to stabilize epinephrine and norepinephrine ionotropic effects along with strong inhibition for GABA release at high doses.

14 Ethnomedicinal and Phytoeconomic elaboration of Lilownan valley District Shangla, Pakistan.
Muhammad Ajmal Shah1, Mohammad Saeleh1, Zahid Khan1, Bakht Zada1, Hubib Ahmad1 and Zafar Alam Mahmood1
1Department of Pharmacognosy, Federal Urdu University of Arts, Science & Technology, Karachi, Pakistan.
2Department of Botany, Hazara University, Mansehra, Pakistan.
Introduction: The Flora of Pakistan and especially that of Northren Part has tremendous scope to evaluate their ethnomedicinal importance for more realistic way to justify their traditional usage and applications. Methods: Based on this, an ethnomedicinal survey was carried out in the Lilownai valley, District Shangla Khyber Pakhtunkhwa, Pakistan in summer 2008 and reinvestigated during 2010-2011. Results: The study showed that the local population not only use indigenous medicinal plants for curing various diseases but also earn their livelihood by selling some of them in the local market. One hundred and twenty five medicinal plants are being used by local people in the study valley in which a diversified application of these species have been observed. These include (24 species) astringent and for other skin problems, (16 species) laxative, (14 species) stomachic, (14 species) diuretic, (11 species) carminative, (10 species) anthelmitic, (10 species) used in reproductive disorders, (9 species) are used in various hepatic disorders, (9 species) used in various CNS disorders, (8 species) antispasmodic, (8 species) expectorant, (7 species) antirheumatic, (5 species) antiseptic, (4 species) anti-diabetic, (4 species) purgative, (4 species) aphrodisiac, (3 species) anticancer, (2 species) anti hypertensive and (2 species) for ophthalmic use. Similarly the remaining species have one or more medicinal use(s). Seventeen species of them are also collected for trade purposes that include Ajuga bracteosa, Paeonia emodi, Berberis lyecum, Mentha longifolia, Diospyrus lotus, Skimmia lauriola, Zanthoxylum alatum, Morchella esculenta, , Bistorta amplexicaulis, Podophyllum emodi, Dryopteris juxtastoppia, Allium sativum, Cichorum intybus, Plectranthus rugosus, Dioscorea deltoidea, Juglans regia and Polygonatum multiflorum. Conclusion: Market survey revealed that the collectors are often not aware of the high market value and medicinal application so most of the collected material is sold to local middle man at very low price. Furthermore they are also do not take care during plant collection.

15 ELEVEN TYPES OF PRESCRIPTION ERRORS, “A Case Study Of Karachi, Pakistan”
Mirza Tasawar Baig, Mohammed Sualeh, Ali Akbar Sial and Sikandar Khan Sherwani
1Faculty of Pharmacy, Federal Urdu University, Karachi Pakistan
2Departrment of Microbiology-Federal Urdu University-Karachi-Pakistan

A study on eleven types of Prescription Errors was carried out to evaluate the potential harm to the population of comparatively well-educated, cosmopolitan city, Karachi. This study would prove to be a tool to establish an appropriate reporting system for prescription errors. It will also help to evaluate the factors behind irrational ways of prescribing and would help to evaluate the potential harms and to improve prescribing practice in Pakistan. The government of Pakistan may take far-reaching steps on the basis of this study to facilitate the public-health. The study was conducted in 50 Pharmacy/Medical Stores from 18 towns of Karachi and 400 prescriptions were collected. The results exhibited very much alarming condition and are indicating strong need of consideration of health-care facility in Karachi, Pakistan. Being included in the list of developing countries, at far lowest side, Pakistan is spending very less amount in provision of health-care facility. In 14.75% prescriptions, various types of Drug-Related Errors were found. 3.75% prescriptions showed errors in writing wrong-route of administration where as in 49.25% prescriptions the route of administration was not readable and 48.5% prescriptions were showing error of omission of route of administration, and patients were not clear about the route, as they were not told and counsel by any health-care professional in this regard. 10% prescriptions exhibited that the prescriber were writing the strength of drug that is not available in market. In 5.5% cases, the dose prescribed was lesser than the standard dose of drug, while in 27% prescriptions, the dose could not be evaluated during this study due to certain factors like unclear writing and incomplete information in prescriptions like non-availability of patient weight and age information etc. Errors related to wrong-dose, i.e. overdose were found to be 11.75% and 27.5% prescriptions were illegible and contributed to hinder the evaluation of various types of errors in prescriptions. This study showed that 39.75% prescribing practice utilizes non-standard terminologies. 38.5% prescriptions were not mentioning the details of prescriber and were seemed to be written either on plane papers or on writing-pads which have no details of doctors in header or footer. 46.25% prescriptions were missing the duration of medication to continue. 46.25 % were missing the patient information on prescriptions, which may also cause potential errors of dispensing to wrong patient.

16 PERINATAL MORTALITY: A Dissection of Social Myths, Socioeconomic Taboos and Psychosocial Stress
Aleeza Tariq, LUMHS Jamshoro

Background: several independent and inter-dependent factors contribute in high rates of perinatal mortality. The Aim of this study was to identify community based myths and obscure beliefs that affect maternal health, and to find socio-economic and psychological co-relates impacting on PNM. Methods: This small scale, community based study was carried out in June, 2012 at squatter settlements of Karachi. A pretested structured questionnaire was administered to married women of child bearing age (15-49 years) with history of perinatal mortality. Results: Out of 55 successfully surveyed women, 63.6% did not take antenatal care; 40.9% due to ‘infertility’ myth; 22.7% had no access. Generally women were of poor health; 52.7% weighed 40-50KGS, 43.6% were severely anaemic. The literacy rate among surveyed women was very low; 63.6% were illiterate. During pregnancy, 34.5% did household work for 6-8 hours in a typical day; and 38.2% were pressurized for sons. The rate of betel nut, tobacco and drug addiction was high among them 67.3%, 50.9%, 25.5%, respectively. The majority (40%) of husband’s worked as fisherman and 76.4% had their husband’s income < 5,000 per month. 74.5% lived in joint families. 47.3% of their babies were Low birth weight (<2.5kg) and 38.2% died in first 12 hours; asphyxia caused 30.9% of these deaths while 29.1% were due to pre-eclampsia. However, 14.5% mothers believed it was due to God’s will. 54.5% new-borns were
male and 45.5% female. **Conclusion:** In order to reduce perinatal mortality, it’s important not only to make antenatal care accessible but also acceptable and available. Due efforts are required in educating women about the health benefits of antenatal care, and increasing women’s overall awareness to help them uplift their physical and mental health, and social, and economic wellbeing in community. **Keywords:** perinatal mortality, social myths, socioeconomic.

### 17 Phytochemical, Phytotoxicity activity and Antifungal screening of *Carica papaya* L. leaf extracts against pathogenic fungi: A Search for new therapeutics

*Sikandar Khan Sherwani*, *Aisha Irshad*, *Haroon Ahmad*, *Kanwal Nazim*, *Syed Aneel Gilani*, *Asma Bashir* and *Mirza Tassawar Baig*.

1 **Department of Microbiology**, Federal Urdu University of Arts, Science and Technology-Karachi-Pakistan.
2 **Department of Biotechnology**, Quaid-e-Azam University-Islamabad-Pakistan.
3 **MRCC-University of Karachi**-Pakistan.
4 **Botanical Division-Pakistan Natural History Museum-Islamabad-Pakistan**
5 **5-Department of BioSciences-SZABIST, Karachi-Pakistan**
6 **6-Department of Pharmacognosy, Federal Urdu University of Arts, Science and Technology-Karachi-Pakistan**

**Introduction:** Plants have been explored extensively all over the globe in quest of a novel bioactive that could a good therapeutic candidate treating infectious diseases. *Carica papaya* L. has also been in practice in folk medicine form a long time. Fungal infections is also now-a-days a big challenge in terms of treatment by the currently available antifungal agents.

**Material and Methods:** The leaves of *Carica papaya* L. were plucked as a whole with care and kept in sterile bags in sufficient quantity at Karachi in 2011 for making 5% crude aqueous extract. The boiled and crushed crude extract of *Carica papaya* L leaf extract prepared and was subjected for screening 6 saprophytic fungi, 5 dermatophytic fungi and 6 yeasts. All the human and plant pathogenic fungi for the sake of screening were identified on the basis of conventional methods and drug sensitivity was also determined. Phytochemical analysis was done by Harbone 1973 method. In vitro antifungal activity was carried against 30 clinical isolates of by Agar well technique against a number of potential human and plant fungi followed by MIC determination by means of Microdilution method. The phytotoxic activity of the test samples was checked against Lenna minor L. The method of McLaughlin et al was followed for this activity. **Results:** Phytochemical analysis indicates as both the extracts of leaves possess flavonoids, alkaloids, carbohydrates, glycosides, proteins etc. The antifungal activity was found in 75% of the fungal species tested. The antifungal activity was found more or less same with slight variation in both treatments of extracts against *A. flavus*, *A. niger*, *Penicillium sp*, *Rhizopus*, *M. canis*, *T. mentagrophytes*, *T. tonsurans*, *C. albicans*, *C. galbrrata* and *C. kruzei* within the range of 17-22 mm zone of inhibition and MIC were found around in the range of 80-200μg/ml. **Conclusion:** The inhibitory effect of aqueous and crude extracts of *Carica papaya* on some human and pathogenic fungi indicate its therapeutic potential as antifungal agents and ideal in the current global challenges of antifungal antibiotics conventionally prescribed in mycotic infections. Furthermore, it is inact preliminary screening; however, further studies with proper scientific knowledge and documentation should be carried out to explore other areas to really make it a successful therapeutic candidate in future.

### 18 Clinical diagnoses of Bovine Mycoplasmosis and its prevalence in Karachi city.

*Syed Khurram Fareed, Faiz Muhammad and Aqeel Ahmad*

Department of Microbiology, University of Karachi, Karachi.

Mycoplasmosis is a most serious and economically most costly disease of cattle and buffaloes due to its high morbidity and mortality. Contagious Bovine Pleuropneumonia (CBPP), a typical disease of cattle's caused by *Mycoplasma mycoides* subsp. *mycoides* Small Colony (Mmm SC), and other species of Mycoplasmas, such as *M. bovis*, *M. bovigenetalium* and *M. arginini* are important contributors to bovine respiratory diseases, arthritis, mastitis, genital disorders, etc. This type of infections or disorders most of the time persist due to mismanagement and unhygienic condition of the farm. Therefore, these infected animals are sent to the slaughter house for slaughtering to meet meat demand. While this slaughtering cause a shear loss of superior germ plasm. Clinically 112 animals were examined for respiratory signs whereas 73 were showed respiratory signs (nasal discharge, coughing, sneezing and weakness). On the other hand 87 lung samples (from slaughtered animals) were examined for lesions and visually 58 samples were found pneumonic. Out of 58 samples, 37 were found positive on the basis of cultural characteristics, morphology and biochemical tests. On the basis of present study, it is concluded that mycoplasmosis found 66 percent. But further study is still in progress regarding the molecular identification and the control of mycoplasmosis.

### 19 Comparative Study of Commercially Available Baker’s Yeasts to Evaluate Their Gas Production Ability

*Ayeza Naeeem, Tanvir Abbas, Abid Hasnain*, *Tahira Mohsin Ali*

Department of Microbiology, University of Karachi & Department of Food science and Technology

Yeast (*Saccharomyces cerevisiae*) is a biological leavening agent used in wheat breads, pizza dough, pita bread, crackers and many other bakery products. The organism converts the fermentable sugars present in the dough into Carbon dioxide gas and ethanol. CO₂ gas acts as a major leavening agent during bread dough processing while small amount of leavening is also
Medication error is considered to be an important indicator of a patient’s safety. Several error producing factors contribute to its occurrence and may jeopardize the self-esteem of the health care professionals who commit the error. Using a mixed method design, this study aimed to identify the underlying factors of medication errors and the experiences of the health care professionals who had committed medication errors. The study was conducted at a tertiary care hospital in Karachi. Following the eligibility criteria, 64 medication errors, reported in the period from December 2011 to March 2012, were included in the study. Data was collected by reviewing documents pertinent to the errors, a self-administered survey questionnaire, and face-to-face interviews with doctors, pharmacists, and nurses who had committed an error. Analysis of the quantitative data showed that of the 64 errors, 49 were actual errors, 15 were near misses and 2 were classified as sentinel events. The highest percentage of errors was committed in the administration phase, by nurses, in the morning shift. The content analysis of the qualitative data led to two themes – stress and workload and the violation of policies. The immediate reactions of the health care professionals to the incidents included denial, shock, anger, distress, and guilt. Their responses were mainly dependent on the nature of the incident. Support from spouses, the management staff, and colleagues helped them to cope with their emotions, but the need of official counselor was identified. Most health care professionals accepted the error as a learning opportunity but remained worried about the consequences the incident may have on their professional image and career. These findings have implications for the hospital administration to bring an improvement in the system. Keywords: Medication errors, factors, emotional responses, coping strategies

21 Evaluation of Helicobacter pylori seroprevalence in iron deficiency anemia.

Dr. Sulaiman Ahmed, Dr. Afshan Sumera, Dr. Imtiaz Hussain, Dr. Mohammad Nadeem, Dr. Adnan Ali, Dr. Rafiq Khanani, Dr. Shaheen Sharafat, Dr Talat Mirza. Department of Pathology, Dow Medical College, Dow University of Health Sciences, Karachi.

Background: Chronic gastritis with Helicobacter pylori is common in unexplained Iron deficiency anemia (IDA), commonly affecting young children and adult females. Failure to diagnose gastro-intestinal (GI) bleed by routine workup is common. Patients may benefit from successful oral iron therapy with Helicobacter pylori eradication. Our objective was to evaluate seroprevalence of Helicobacter pylori in patients with established IDA in a descriptive case control setting. Materials & Methods: With institutional ethical approval, 270 subjects were screened, (from September 2010 to April 2011) by a structured questionnaire followed by automated complete blood counts (cell tac alpha, Japan), serum ferritin ELISA (BiocheckInc, USA) and screening for β thalassemia trait (by discriminated function indices & osmotic fragility test - NESTROFT). After initial screening, we included 229 subjects; n=117/229 (51%) were categorized as “cases” with IDA and n=112/229 (49%) were categorized as “controls” with no IDA. Helicobacter pylori IgG ELISA (BiocheckInc, USA) was tested on serum of all 229 subjects, followed by statistical analysis on SPSS ver Results: Statistically significant seropositivity of Helicobacter pylori IgG (p value <0.05)80.3% was found in cases (IDA) and 55.3% in control (no IDA) subjects. Highest seroprevalence was seen in age group 1-15 years (53.4%). Conclusions: High seroprevalence of Helicobacter pylori IgG (80.3%) is seen in cases with IDA. Young age group of 1-15 yrs with IDA has highest seropositivity of Helicobacter pylori IgG. Key words: Iron deficiency anemia (IDA); seroprevalence; Helicobacter pylori IgG.

22 Minimum Inhibitory concentrations (MICs) and antimicrobial susceptibility pattern of Helicobacter pylori isolated from gastric biopsies.

Taranum Ruba Siddiqui, Waquaruddin Ahmed, Ambreen Arif.
Pakistan Medical Research Center-Jinnah Post Graduate Medical Center
Introduction: Helicobacter pylori infection causes a wide range of gastrointestinal diseases. *H. pylori* has been classified as a type I carcinogen since 1994. Successful eradication of *H. pylori* lowers the risk of cancer. **Purpose of the Study:** Reliable measures of the local drug resistance in *H. pylori* are an important factor which contributes successful eradication of this infection. The purpose of this study was to determine the antimicrobial susceptibility pattern of Helicobacter pylori isolated from gastric biopsies. **Methodology:** This cross-sectional study was conducted from May 2010 to May 2012 in PMRC, Gastroenterology and Hepatology unit, JPMC Karachi. A total of 125 Campylo like organism test (CLO-test) positive, gastric biopsies were cultured and susceptibility tests were done by disk diffusion method. Minimum inhibitory concentrations of antimicrobial agents were also estimated by Epsilometer-test. **Results:** Total 125 CLO positive patient’s biopsies were taken and cultured; *H. pylori* were isolated from 45 (36%) biopsies. Sensitivity test was done on 37 (82.2%) isolates. Disc diffusion method for susceptibility pattern of antibiotics shows 27% resistance to Ofloxacin, 16% to Levofloxacin, 13.5% Furazolidone, 2.7% Tetracycline. Minimum inhibitory concentration (MIC) of three antibiotics against *H pylori* was tested on E-strips; it shows 91.8% resistance to Metronidazole, 5.4% to Amoxicillin, and 2.7% to Clarithromycin. Resistance against more than one drug was observed in 40.5% isolates. The frequency of triple and quadruple drug resistant was 16.2% and 2.7% respectively. **Conclusions:** Multiple drug resistance against commonly prescribed antibiotics is quite high in Helicobacter pylori isolates. Routine antimicrobial susceptibility test is important to achieve eradication of *H. pylori* infection.

### 23 Innovative Solution to Sharp Waste Management In A Tertiary Care Hospital, (JPMC) Karachi, Pakistan: A Pilot Project

**Dr. Seher Qaiser, Dr.Ambreen Arif, Dr Saeed Quaid, Dr Tasneem Ahsan, Dr Kashif Riaz, Dr Saad Niaz, Dr Huma Qureshi, Dr Waquaruddin Ahmed, Syed Ejaz Alam**

**The Health Foundation, Pakistan Medical Research Council, World Health Organization and Jinnah Post Graduate and Medical Centre**

**Introduction:** Prevalence of Hepatitis B and C in Pakistan is estimated to be 2.5% and 4.5% respectively. The major cause of these infections is reuse of syringes. The pilot project aims to find out an innovative cost effective replicable solution to break the cycle of transmission of blood borne infections by preventing reuse of syringes. **Method and Settings:** (July 2011 – June 2012) Situation analysis was carried out in JPMC, Karachi on Sharp waste management and awareness level amongst paramedics and clinicians. Based on this training program was structured for healthcare providers. Two Needle removing devices were given to each ward. A pit was constructed for disposal of sharps. **Results:** 30 wards were included in the study. Situation analysis showed 66.7% of wards had loose syringes not disposed adequately. No puncture resistant container in 80% wards leading to accidental needle stick injury by the paramedics in 30% of cases. Syringes were recapped by the provider using both hands in 90% cases. In 93.3% cases there was no injection safety, waste disposal guidelines by the Ministry or the hospital and 83.3% of the staff had not received any formal training on injection safety. After six months of installing the needle removers, all 30 wards were using the device with no report of liquid leak or needle escape from the needle remover. **Conclusion:** Lack of knowledge/ indifferent attitudes with non-availability of appropriate equipment was leading to high incidence of needle stick injuries in health care providers exposing them to blood borne infections while inappropriate disposal leading to its reuse and contributing to high incidence of viral hepatitis in general population of Pakistan. Small innovative measures such as constant refresher training, monitoring, evaluation and supply of low cost injection safety equipment in a tertiary care hospital could substantially reduce the risk of new infections in medical profession and general population.

### 24 Maternal Psychiatric Morbidity And Childhood Malnutrition

**Ayesha Sarwat, Muzzamil Ejaz, Tahniat Aisha**

**Dow International Medical College, DUHS.**

**Objective:** To determine maternal psychiatric morbidity and its relation with malnutrition in their children. **Methodology:** It was a case control study conducted at Nutrition Rehabilitation Unit of Department of Pediatrics, Civil Hospital Karachi, Pakistan from March to September 2011. Samples included hundred children between 3 to 36 months of age. The number of cases and control were fifty each. Children with moderate and severe malnutrition according to WHO classification were included in the case group whereas controls were children of the same age group and normal weight, coming to the department with common illnesses like acute respiratory infections, diarrhea, during the same time period. Mothers of both groups were screened for a probable psychiatric morbidity using HADS (The Hospital Anxiety and Depression Scale), a psychiatric screening instrument. The score of more than eleven on either sub scale of HADS was considered significant for presence of psychiatric illness in the mothers. Data was analyzed through SPSS 15. Statistical analysis of data was done by using Odds ratio, stratification and logistic regression for each variable in both case and control groups. **Results:** Maternal HADS score was significantly high >21 in 50% of cases whereas in controls it was 46% (O.R=0.85 (95%CI=0.38-1.86). Of the malnourished 90% and controls, 84% belong to low income status OR=1.71 (95% CI 0.52-5.6) whereas low birth weight was 64% in cases and 56% in controls OR=1.39 (95% CI 0.62-3.11). **Conclusion:** Maternal mental health affects the nutritional status of the children. Anxiety and depression are common psychiatric illnesses found in our society as suggested by significantly high HADS scores of mothers in both cases and control groups. It also shows that it is difficult to establish a straightforward relationship between maternal psychiatric illnesses and poor nutritional status of their children. However increasing age of mothers, low birth weight of child, increasing family size and low income are associated important risk factors for predicting increasing HADS scores in mothers of malnourished children.

Dr Amna Hussain and Junaid Mahmood Alam
Department of Chemical Pathology, Liaquat National Hospital and Medical College, Karachi.

Objective: The aim of this study was to compare lipid profile in lean and obese women with PCOS with normal weight and obese controls. Methods: This was an analytical cross- sectional study, conducted at department of Chemical Pathology, Liaquat National Hospital, Karachi from March 2006 to April 2007. Fifty cases of PCOS were selected along with 50 healthy ages, sex, and weight matched controls. Result: The mean fasting levels of TC, TG and LDL-C were significantly higher in women with PCOS than control women (p value < 0.05) while HDL-C was significantly low in PCOS patient than control (p value < 0.001). Compared with obese PCOS subject, non-obese PCOS subject had low TG (p value < 0.05) while HDL-C level was high (p value <0.05).Leve of HDL-C were lower in both obese and non-obese PCOS patient than obese and non-obese control. Conclusion: PCOS is associated with a more pronounced atherogenic lipid profile having low HDL-C whether they are obese or not. It was observed that obesity was independently associated with atherogenic profile but the lipid parameters were adversely affected in a subgroup of PCOS, which were obese. So we can say women with obese PCOS are at high risk of developing cardiovascular diseases. Key words: dyslipidemia, obesity, PCOS.

26 Incidence and Causes of Neurosurgical Cases reported in tertiary care hospital of Peshawar in the month of December, 2011.

Muhammad Salman Haider Qureshi*, Co-Authors: Najmush Shakireen*, Waqas Afzal *, Dr. Abdullah Banosi **, Bakhtawar W. Qureshi***
* Peshawar Medical College (PMC), Peshawar.
**Lady Reading Hospital (LRH), Peshawar.
***Institute of Physical Medicine and Rehabilitation (IPMR), Peshawar.

Introduction: Neurosurgical cases include a list of all those diseases and accidents which affects the body Nervous System and requires surgical approach for their treatment. The current study was undertaken to determine the frequency and various causes of neurosurgical cases leading to the admission of patients in neurosurgical wards.

Objectives:
1. To find the incidence of neurosurgical cases reported in the tertiary care hospital of Peshawar.
2. To identify various causes / diseases responsible for the admission of patients in the neurosurgical ward.
3. To compare the frequency of various neurosurgical diseases among male and female patients.
4. To quantitatively compare the frequency of cases related to avoidable causes with the cases associated with unavoidable neurosurgical diseases.

Methodology: Descriptive study was performed in the neurological ward of Lady Reading Hospital, Peshawar. The required data was collected from the official register of neurosurgical ward which was then entered in especially designed analyzing sheet. Further analysis was done through MS Excel software. Study duration was about 7 days. Results: Total 195 cases were registered in the neurosurgical ward of LRH in the month of December, 2011. Out of 195, the data of 22 cases was found to be incomplete. Majority of the cases registered were related to the History of Fall (HOF) with frequency of 30 followed by Road traffic accidents (RTA) with incidence number of 23. CNS Tumors (n=16) were found to be the third leading cause..

27 Suggestive Chemotherapeutics with Specific Activity against Leukemia

Mudasir.A.D
Dow University of Health Sciences Karachi

Background: Leukemia is a malignant disorder of blood cells; a major problem around the world occurs because of diverse grouping and staging, there is no specific treatment at all. According to FAB classifications AML classified into M0 – M7 and ALL L1 to L3, chronic type of leukemia’s are also diverse grouping. Leukemia occurs equally in both sexes, mortality rates are usually high because of poor prognosis and not a valid treatment. Objective: Target leukemic specific receptor to kill the malignant cells, to avoid others cells cytotoxicity, to avoid others side effects. Material and Methods: By using sequence of ABL and BCR fusion gene and protein, we may produce specific antagonist against these primary and tertiary structures, that antagonist or drug must specifically bound and catabolized abnormal gene and protein, bounded ligand unable to act with receptor tyrosine kinase, which have ability to proliferate cells mostly occurring in CML. Another method we may use recombinant P53 tumor suppressor protein which enhance a cell for repairing and apoptosis in leukemia like conditions.
Expected Results: Combination of all drugs can help us to complete remission of leukemic patient, no side effects found at all, others cells cytotoxicity may be reduced to absent. Conclusion: Previous chemotherapy which having more side effects rather than a beneficial effect, that’s why this new therapy will help us physiological specific receptors TKR, P53 and specific gene will be targeted to see the better effect or cure rather than a side effects.

28 Effects of Weight Training, With and Without Abusing “Power Enhancing Drugs” on Normal Male Subjects: A Study on Lipid Parameters.

Faizan Mirza1 & Sadaf Ahmed1,2
1Department of physiology, University of Karachi
2Advance Educational Institute and Research Centre.

Exercising is largely believed to reduce the chances of cardiovascular disorders. Many people opt for fat-burning workouts to achieve a lean physique while others aim at getting a well-muscled body. The latter being a long and tiring process, pushes many people to opt for power enhancing drugs, for boosting their athletic endurance. These include steroids, erythropoietin, creatine, protein and zinc supplements among others. Together with increasing the muscle bulk, they exert highly undesirable effects on normal physiology. The effects these drugs have had on lipid parameters of male subjects were evaluated and compared. Peripheral blood samples were collected from brachial artery and tested for levels of Tchol, HDL, LDL, TG and v-LDL. All the parameters were compared using t-test, among each other as well as against a control group. The results showed that depending on the type of PED used, it exerted profound unhealthy effects on all lipid parameters. These results suggest that these PED have predisposed the users to various cardiovascular disorders. It is suggested that the usage of such drugs should be discontinued in order to reduce cardiovascular risks.

29 Work Associated Stress on Female Medical House Officers of Karachi, Pakistan.

Arisha Sohail1, Muhammad Bilal Azmi2, Mehwish Hussain1, Sarah Shamim Azmi1 and Shamim A. Qureshi2
1Dow Medical College, Dow University of Health Sciences, Karachi, 74200, Pakistan.
2Quality Enhancement Cell, Dow University of Health Science, 74200, Karachi, Pakistan.

Background: Stress is non-avoiding part of one’s life. Evaluation of stress among medical professionals remains a key subject as it can improve the quality of services and outcomes of healthcare sector. Aim: Assessment of work associated stress in female medical house officers of Karachi with respect to age and marital status. Materials and Methods: Cross-sectional survey covered 106 female medical house officers, filled the standardized questionnaire with 10 different questions and statistically analyzed (PASW 18). Results: Cronbach’s alpha was 66.9%, age ranges of participants were 19 to 29 years with overall 44.70 ± 10.87 job stress score. Regression analysis showed that married females have 8 units more stress than unmarried females which need to address and resolve. Through correlation of factors, “high responsibility with low authority” was extremely significant (p≤ 0.005) in association with “lack of attention towards work, low rewards and social imbalance”, while “job instability” significantly (p≤ 0.05) correlates with “job dissatisfaction and self-control at work”. Principal factor analysis revealed some informative aspects like insecurity with work environment, disturbance within job, ownership of duties and mental disturbance. Conclusion: Ability to handle occupational issues and keep balance between professional and social lives is an important way to reduce stress. Key words: Cross-sectional, female medical house officers, job, work associated stress.

30 Identification of Current Psycho Social Health Issues in Pakistan and their Solution in the Light of Holy Quran

Quratulain Mahmood*, Dr. Noor Ahmed Shahtaz**, Sheikh Zayed Islamic Centre, University of Karachi.

Purpose of Study: There is a growing need to identify current psychosocial health issues in Pakistan in different contexts of either disasters or socioeconomic problems and to approach the solution in the light of Holy Quran (which provides the ultimate solution to every problem). Introduction: Psychosocial health issues are considered to be an important aspect to be considered for development of societies. It is identified by different behavioral changes. It is also necessary to bring awareness that mental health and social factors should be incorporated as important components of all aspects of disaster planning including risk reduction, preparedness, response and recovery. The psychological and social impacts of emergencies or disasters may be acute in the short term, but can also undermine the long term mental health and psychological well being of the affected population. This can have an adverse impact on the psychosocial and economic well-being of the community as a whole. Being Muslims guidelines must be taken by Holy Quran to address psychosocial and mental health factors in the context of disasters. These guidelines offer concrete suggestions and action items that can implement by involving government, NGO’s Universities and society. Methodology: This review is based upon literature survey on internet using search terms like psychosocial health issues, health issues on Pakistan, social issues on Pakistan etc. We found out that psychosocial health issues are expanding rapidly with the continuous change in environment and behaviors in Pakistan. 2 Questionnaires: 5 questions 100 people. Age group 25 – 35 and Gender both male and female. One before advising the
guidelines of Holy Quran and one after advising the guidelines of the Holy Quran. **Result and Conclusion:** Results showed that 65% of the patients following strictly the guidelines have improved 90% than the patients only under drugs and psychological sessions. Hence, it is concluded that Holy Quran not only provides the guidelines but also has proved its magical impact on distressed society.

### 31 Antihyperlipidemic Effect of CITRUS LIMON Consumption in Experimentally Induced Hypercholesterolemia

**Sauleha Mehmood, Gnazala Yasmeen, Lubna Naz & Nazish Iqbal Khan**  
Pathophysiology Research Unit, Department of Physiology, University of Karachi, Karachi 75270 Pakistan.

**Background:** Cardiovascular Disease (CVD) is the leading cause of morbidity and mortality worldwide while atherosclerosis is the principal pathophysiological contributor of myocardial and cerebral infarctions. The predominant etiology of premature coronary artery disease is known to be lipid disorders that induce vascular and cellular changes. Substantial evidence suggests that atherosclerosis can be prevented or at least delayed in risk population. **Objective:** The purpose of present study was to assess the antihyperlipidemic effect of dried Citrus Limon juice consumption in experimentally hypercholesterolemic animals. **Methodology:** It was a case-control prospective study conducted at the department of Physiology, University of Karachi. Age matched 18 rabbits were randomly divided into three groups of equal size after one week of acclimatization. Base line values of plasma lipid profile and plasma transaminases were taken after over-night fast. Later the atherogenic diet was administered for about four weeks in group 2 & 3 followed by p.o. administration of Citrus Limon juice along with atherogenic diet in group 3 for the same time period. Blood specimens were obtained and assayed for alteration in all fore-mentioned parameters at every dietary modification. *p*<0.05 is chosen as level of statistical significance. **Results:** The daily consumption of Citrus Limon juice significantly reduced serum cholesterol, triglyceride and insignificantly LDL-C in cholesterol fed rabbits. While the changes in HDL and plasma transaminases were found insignificant as compared with the control & hyperlipidemic groups. Its also brought a reduction in body weight and oxidant status. **Conclusion:** These finding suggest that Citrus Limon juice has antihyperlipidemic effects and its dietary supplementation may reduce or delay atherosclerosis and its consequences.

### 32 Cystatin C as an Early Marker Of Diabetic Nephropathy Independent Of Age And BMI

**Saima Ejaz, Nighat Maman, Masood Anwar Qureshi, Manohar Lal, Atif Mahmood, Tallat Naz**  
Department of Physiology, Dow International Medical College, Dow University of Health Sciences, Karachi.

**Background:** Recent studies have investigated the role of Cystatin C as early diagnostic marker of renal impairment in diabetic patients. Cystatin C is a cysteine protease inhibitor produced by all nucleated cells, freely filtered at the glomerulus and fully metabolized by proximal tubule without secretion. Its concentration in Plasma is exclusively determined by GFR making it an excellent non invasive indicator of GFR. **Objectives:** To compare Cystatin C levels as early biomarker of Diabetic Nephropathy and determine the effect of Age and BMI on Cystatin C levels. **Methodology:** A cross sectional study was conducted on purposive sample of 110 diabetic male and female (aged between 30 to 60 years) patients. The patients were asked to fill a detailed questionnaire about their personal, present and past medical history. Blood and spot urine samples were drawn to measure, serum Cystatin C and urine albumin. Subjects were then categorized into three groups: normoalbuminuric (normotensive), microalbuminuric (normotensive) and macroalbuminuric. **Results:** Cystatin C levels showed highly significant (P < 0.0001) stepwise increase with albuminuric levels. High levels of serum Cystatin C were obtained in micro (1.05 + 0.36 mg/l) and macroalbuminuric group (2.26 + 0.66 mg/l) than the normoalbuminuric group (0.71 + 0.216 mg/l). A very weak positive insignificant correlation was observed between Cystatin C levels and age (r = 0.112, *p* = 0.245). No significant correlation was found between Cystatin C and BMI (r = 0.07, *p* = 0.46). **Conclusion:** The present study concluded that serum Cystatin C seems to be a promising endogenous marker in estimation of renal function at early stages of diabetic nephropathy. Sharp rise in serum Cystatin C levels predicts rapid and early diagnosis of decline in GFR. More over it is not influenced by BMI and age of the patients.

### 33 A case study of SOS Village and its role in Psycho-Social and Educational Development of Orphan Children

**Sakina Riaz, Department Of Social Work, University of Karachi**

Pakistan has rich traditions of caring for children without parental support. This is derived from the religion and cultural ethics of the society. It is significantly manifested in the form of institutional care provided to orphans. The present research work has focused on the role of Orphan Home and their impact on orphan child. The present study is exploratory in its nature. The universe in the present study was “SOS village”, an international NGO located in Karachi, Pakistan. In the present study purposive sampling method was used for data collection. The sample of 37 orphans living in SOS village, Karachi was interviewed. Data for the study was collected from both primary and secondary sources. The purpose of this study was to initiate an attempt to discover the institutional services of SOS village. The data was collected through survey questionnaire form orphan children. The data was analyzed in a tabulated form, results of Interview schedule was presented in a narrated form. The scope of the study included documentation of best practices for institutional care in the mega city of Karachi as well as analysis of the situation of institutional care. In the light of results of the study, strong recommendations and suggestions
have given to determine the role of Orphan Home in educational and social educational institution as they are playing a vital role in advanced countries.

<table>
<thead>
<tr>
<th>Investigating the Protective effect of Solanum Melongena</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saima Gul¹, Sagheer Ahmed², Kaneez Fatima Shad³ * and Humaira Gul⁴</td>
</tr>
<tr>
<td>¹Department of Biotechnology, Abdul Wali Khan University Mardan (AWKUM), Pakistan</td>
</tr>
<tr>
<td>²Department of Pharmacy, Kohat University of Science and Technology (KUST), Pakistan</td>
</tr>
<tr>
<td>³PAP RSB Institute of Health Sciences, University of Brunei Darussalam, Brunei Darussalam</td>
</tr>
<tr>
<td>⁴Department of Botany, Abdul Wali Khan University Mardan (AWKUM), Pakistan</td>
</tr>
</tbody>
</table>

The aim of this study is to investigate the protective effect of *Solanum melongena* (*S. Melongena*). Different solvent were used to extract the fractions. Antiplatelet activity was monitored using dual channel Lumi aggregometer, antioxidant enzymes were measured using kits purchased from RANDOX, UK, while calcium channel blocking activity was screened on guinea pig ileum using isolated organ bath assembly. Aqueous fraction, Ethyl acetate fraction and Chloroform fraction potently inhibited platelet aggregation, antioxidant and calcium channel blocking activity respectively. These results indicated that all fractions of *S. Melongena* possesses antioxidant properties but aqueous fraction posses both AA and PAF antiplatelet activity and chloroform fraction acts as calcium channel blocker. We hypothesized that fractionation process may be responsible for the modification of the active compounds present in the extracts of *S. Melongena* and hence for their respective properties. Moreover, PAF aggregation cycle molecules which are involved in blocking may not be soluble either in ethyl acetate or chloroform.
35 Causes of stress in First year Medical students.
Abida Faiz, Talpur, Syeda Zehra Tazair, Awais Arif, Anna Jameel, Hamza Abid.

Background: This study was designed to highlight the important causes of stress in first year medical students. It was conducted on the first year class of MBBS at Rawalpindi Medical College (RMC). Method: The study was conducted on 1st year MBBS class of RMC. A semi structured questionnaire was designed as a tool for data collection. The data was collected on 1st April 2010. 306 1st year MBBS students were taken as a sample. The study sample was stratified according to sex, residence (day scholar/ hostilities) and age. SPSS was used for the data analysis. Results: The response rate was 81.69% (250 out of 306). Out of which 70 (28.0%) were males and 180 (72%) were females. Majority of students perceive stress as inability to cope up with increased work load. Vastness of academic curriculum, prolonged exam period, frequent tests and vivas were the potent stressors for the 1st year MBBS students at RMC. Conclusion: A high level of stress prevails amongst the first year medical students which are affecting not only their academic performance but also their physical, mental and social health. Measures should be taken to help them out in making strategies to cope up with this stress.

36 Knowledge, Attitude and Practices of Mothers Regarding Weaning
Zonia Butt, Hifa Lakhmir & Wajiha Javed
Bahria University Medical and Dental College

Objective: The objective of our study was to assess the level of knowledge, attitude and pattern of practices of mothers, attending the Paeds O.P.D of hospitals in Karachi, regarding weaning. Through this research awareness levels among mothers regarding weaning were estimated. In addition to this, the different cultural practices and methods of weaning were also studied. Design: The design of this research was purely a cross-sectional study type. Place and Duration of Study: The study was conducted in different hospitals of Karachi from 30th July 2010 till 30th September 2010. The hospitals chosen were Liaquat National Hospital, Aga Khan Hospital, Jinnah Hospital, Abbassi Shaheed Hospital and Civil Hospital. Sample technique: Purposive sampling was used. Sample size: The sample size was calculated and came out to be 383. Data collection procedure: The data was collected through a well constructed questionnaire based on twenty-one questions. All the mothers who had weaned and had children equal to or under 1 years of age were interviewed by the researchers. Data analysis: The data was fed in SPSS and analyzed accordingly. Conclusion: Many mothers were aware of what weaning was but some did not know how to wean properly. Cultural beliefs seemed to play a very strong role in their decisions regarding weaning. Lack of financial stability had forced some mothers to wean late or not at all.

37 MALARIA & DENGUE; Their Impact and Awareness
Isbah Rashid, Ayesha Farheen Javid & Ayesha Moen Islamic International Medical College.

Objectives: To highlight the impact of malaria and dengue in Pakistan, two potentially lethal diseases caused by transmission via mosquitoes. To assess the level of awareness about the two diseases and their prevention among students. Introduction: In Pakistan malaria and dengue both have been a considerable life threat due to the prevailing socioeconomic conditions and epidemiological situation. The diseases can be controlled by keeping mosquito control, especially in endemic areas, an environment rectification approach. Lack of awareness about the preventive measures, the initial signs and symptoms of the diseases and poor reporting were important hurdles in diseases control plans. In recent years, however, many campaigns have acknowledged the citizens. Material and Methods: For the assessment of the impact and control of malaria and dengue we used Pakistan Demographic and Health Survey (PDHS) 2006-07, a nationally representative survey. A society awareness assessment was done by means of a 20-items, cross-sectional, questionnaire-based survey, filled by 150 students aged 16-22 years belonging to various regions of the country. More students from the endemic areas of Punjab were included. It was taken in account that each question is well understood when it is answered. All data was recorded, collected and analyzed. Data Analysis Plan: Data was analyzed and percentages were calculated for each group. Results: Malaria and dengue disproportionately affect the poorer sections of the population living in hot, humid, and remote areas that lack good health surveillance systems; consequently, morbidity and mortality in most instances go unreported. Each year about half a million people suffer from malaria (Government of Pakistan, 2007). According to our survey 93% knew that malaria and dengue transmission is via mosquito bite 83% and 40.2% recognized the specific malaria and dengue vectors respectively, and 88% and 40.02% knew the habitats of these vectors respectively. 84% know the diseases spread and 88% know how monsoon season and humid environment supports the spread. 64% and 28% said that they would consult government hospitals and private clinics respectively. 76.3% knew that malaria has a protozoan (plasmodium) and dengue a viral causative agent.83.5% considered them as serious diseases if not treated in time. 97% were well aware of the signs and symptoms.92% knew some anti-malarial and 70% supported their efficacy, 50.5% knew the side effects and still preferred anti malarial. 72.2% knew that aspirin is not safe to take during dengue fever.89% knew the names of some useful insecticides.
67%.60%.23%.16%.23%.3.09% identified matt/liquid vaporizer/coil usage, “prevention of water stagnation”, regular cleaning of the house, mosquito net usage, insecticide spray and use of oil in air cooler as preventive measures. 12.4% and 45.5% had experienced malaria and dengue themselves respectively. 85% suggested that malaria and dengue control should be a combination of government and public efforts. Conclusion: Malaria and dengue can be very serious diseases if not treated adequately. Public awareness campaigns are important to educate, as knowledge of preventive measures, early diagnosis and prompt & adequate treatment can decrease the morbidity and mortality rates.

### 38 Does Diabetes Affect Everyday Life Challenges? Attitudes and Behaviour of Diabetic Population In Pakistan

**Anam Javed, Ahmar Mehmood & Zeba Haque.**

*Dow International Medical College, Dow University Health Sciences.*

**Background:** Diabetes Mellitus is a metabolic disorder which is strongly influenced by lifestyle factors leading to long-term damage, dysfunction and various organ failures. The effects of disease sufferings on the attitudes and behaviour of the diabetic persons are less studied. **Objectives:** To investigate the changes in attitudes and behaviour towards the disease process and interaction with the social environment of the diabetic persons due to long standing disease. **Methods:** This survey included four hundred participants of both gender, with confirmed type II Diabetes for at least 5 years. A pre-validated questionnaire was used to evaluate the effects of the disease sufferings on the attitudes and behaviors towards social environment and disease. Frequency analysis was used to analyze the data using SPSS version 16.0. **Results:** 35% consider obesity as the cause of Diabetes Mellitus. 65% want to change their diet. 50% consult their physicians regularly to manage their disease. 47.5% have no hope for their cure and 52.5% think that they have become a liability to their co-workers. Only 15% realize the importance of exercise in disease management. 55% of people undergo depression due to Diabetes. 45% of the participants had to change their lifestyles after being diagnosed for Diabetes. Significantly, more people (62.5%) believe that their disease has affected their married life. **Conclusion:** Sufferings of the diabetic individuals alter their behaviour towards their social environment along with their attitude. The study provides a substantial preliminary data to evaluate the effects of disease process on one’s personality which may help to manage the disease more effectively. **Key words:** Diabetes Mellitus, Behaviour, Attitude, Lifestyle

### 39 Analyses of Vitamin B12 Levels and Its Deficiency in Various Clinical Conditions in Selected Younger, Middle Aged and Elderly Population

**Farah Ashraf, Junaid M Alam, Ishrat Sultana, Rabia Babur and Shazia Naureen.** *Department of Biochemistry lab services and Chemical Pathology, Liaquat National Hospital and Medical College, Karachi*

**Background:** Low levels of vitamin B12 have been associated with several clinical conditions and its co-morbidities. Interestingly no single symptom, or group of symptoms, can be directly correlated to its declining state. Reported causes of deficiency among older population are hematologic or neurological, followed by gastrointestinal and a possible altered vascular symptoms. **Objectives:** The present prospective observational study was, hence, initiated to evaluate the underlying clinical condition and symptoms associated with vitamin B12 deficiencies in middle aged and older population. **Materials and Methods:** The study was prospective observational and carried out on 380 patients (males, n = 220 and females, n = 160) for the period six years from 1st January 2006 to 30th Dec 2011. Age ranges were from 18 to 68 years, and categorized in three groups as 18-35 yrs, >35 to <60 yrs and >60 years. Several blood parameters (serum folate, B12, CBC, LDH, creatinine, Hb) were analyzed by standardized methods on automated analyzers. **Results and Conclusion:** Deficiency was found to be more prevalent in older females and percentage increased when analyzed independently in individuals with vitamin B12 levels determined to be less than 150 pg/ml. Malnourishment was noted to be most prevalent among the majority subjects, followed by weakness and anaemia as frequent clinical findings. Other clinical conditions were noted to be neuropsychiatric, followed by paraesthesia and gastrointestinal symptoms. Moreover, vitamin B12 deficient individuals also exhibit other co-morbid as well, such as diabetes, dementia, stroke, ischemic heart disease and Parkinson’s disease. **Short title:** Vitamin B12 deficiency in clinical conditions. **Key words:** Vitamin B12, deficiency, neuropsychiatric, hematologic, clinical conditions

### 40 Cerebral Palsy in Relation to Maternal Health

**Kisa Fatima Altaf**, **Maria Altaf**

1. Dow Institute Of Medical Technology, DUHS. 2. Fatima Jinnah Dental College

**PURPOSE OF STUDY:** To know what Cerebral Palsy (CP) is and correlating the causes of CP in relation to maternal health and reducing the risks with prenatal care. **INTRODUCTION:** Cerebral Palsy is a group of disorders that can involve brain and nervous system functions, such as movement, learning, hearing, seeing, and thinking. Prenatal care is vital for the health of both the women and her unborn child. When the mother develops an infection her unborn baby can suffer adverse affects, including permanent brain damage. The diseases like rubella, chicken pox, cytomegalovirus, inflammatory pelvic disease, syphilis can cause birth defects and have been especially associated with cerebral palsy. **METHODS:** The study design was observational prospective study done at Dow Institute Of Medical Technology in collaboration with Dow Institute of Physical
41 “Dark Chocolate as an Antidepressant”

Madiha F. Sana, Yumna N. Yousuf & Tehseen Quds

*DOW College of Pharmacy (DCOP) , Dow University of Health Sciences (DUHS) Karachi, Pakistan.

OBJECTIVE: To assess the role of dark chocolate in treating depression. INTRODUCTION: Depression is a disorder of reduced mental activities, hopelessness accompanied by pessimistic approach and disturbance in daily routine activities like sleeping and eating habits. Pathophysiology of depression involves reduced levels of serotonin, dopamine and other neurotransmitters which are directly involved in the alterations in mood states. Drugs which raise the levels of these neurotransmitters have been found helpful in treating depression. Following article summarizes the researchers conducted on role of dark chocolate in depression. Dark chocolate contains Dopamine, Serotonin, Anandamide and Methyleneamines which have been found to be pharmacologically active in relieving symptoms of depression. METHOD: Online research was conducted on abstracts and full text articles providing information regarding usefulness of dark chocolate in treating depression. RESULT: Dark chocolate consumption produces feelings of joy and happiness among depressed individuals but this mood shift is short lived. CONCLUSION: Dark chocolate may prove to be useful in treating depression provided further researches be carried out to utilize it as antidepressant therapy.

42 Impacts of Alterations of Teaching Methodologies on Learning Capabilities of Medical Students

Rehman R, Razì MS, Syed S
Bahria University Medical & Dental College

Objective: The aim of this study was to compare and estimate the role of new approaches and methods in the development of understanding and learning capabilities of undergraduate medical students in the module of respiratory physiology. Methods: A comparative cross sectional study was conducted in Bahria University Medical & Dental College using sample size of 198 students from February till May 2010. Difficulties in understanding the concepts of respiratory physiology was analyzed in groups A (Batch 2008-2013) and compared with their test performance. In group B (Batch 2009-2014) “integrated learner-and teacher-centered” approach was implemented by introduction of problem based learning, case based sessions, students seminar, quizzes and structured assignments. Response of group B students was evaluated in terms of concepts and performance by identical feedback form and assessment test. Results: Supplementation of teaching methodologies with augmented interaction improved significant learning, performance and satisfaction among second group students. Conclusion: This study highlighted that competency based education and professional learning of medical students can be enhanced by amendments in teaching strategies with reference to students learning capabilities, difficulties and availability of resources.

Key Words: Teaching methodologies, CBL, BCQs, SEQs

43 Quality Of Lumbar Spine X-Rays In A Tertiary Care Hospital

Sadia Shahid, Amin Rajani, Muhammad Asif Bilal, Uzma Naz, Dr. Vaqar Bari, Mudassir Nazar

Introduction: Back pain is a common symptom; most of the time back pain is self-limited and resolve with analgesics. Non resolving lumber pain needs radiological investigations like plain radiograph and MRI. The most common routine radiological investigation is a good quality radiograph of lumbar spine which should reveal proper detail of examination. In order to avoid the repeat exam proper technique is required which will decrease the radiation exposure to the patient. In this study we will evaluate the quality of lumbar spine radiograph at our hospital with the standard optimized radiograph. Material & Method: The study was conducted at radiology department of tertiary care hospital. This is a prospective study. We evaluated X-rays lumbar spine of 100 adult patients in the age group of 20 to 60 year. The image quality was analyzed using a simple Performa. Results: 100 lumbar spine x rays were evaluated for AP and LATERAL view. In AP view 73%, x-rays had proper collimation, 68% had proper marker placement and 81% had proper patient positioning. In lateral view 64%, x-rays had proper collimation, 64% had proper marker placement and 82% had proper patient positioning. In lateral L5-S1 view, 17% had proper collimation, 64% had proper marker placement and 49% had proper patient positioning. Overall 51% x-rays showed optimum collimation and 49 % had excess collimation. In 65 % of the patients markers were properly placed. In 70% of x-rays patient position was as required. Whereas 30% of the patients were slightly oblique (rotated). In only 49% of the patients lead shield was placed behind the patient in lateral view for blocking scatter radiation. Whereas overall retake rate was 6.3%.
Conclusions: The patient position is near the standard for lumbar spine x-rays at our department. X-ray beam collimation and marker placement is inadequate and needs improvement, which can minimize retake rate.

44 Prevalence of Prenatal Depression in Middle Income Females.

Lubna Anwer, Sammar Naseem, Sadaf Ahmed, Ayesha Javed
Department of Physiology, University of Karachi.

PURPOSE OF STUDY: In this study we want to evaluate the prevalence of depressive symptoms in different trimesters of Pregnancy. INTRODUCTION: Pregnancy is often portrayed to be the most joyous time for the woman, but in reality it is the most difficult period for most of the women. Maternal depression during this stage is partially physiological as a result of an increase in the release of corticotropin-releasing hormone (CRH) from the placenta via the actions of catecholamine and cortisol with differences among stages of pregnancy & individuals. Maternal depression negatively affecting fetal development and neonatal outcome. METHODOLoGY: At 12-16 weeks, 22-26 weeks, and 32-36 weeks of pregnancy, participants were screened for depression using the “Zung Self-Rating Depression Scale”. The data has been collected from females whose ages are between 20-35 years & having middle class socio economics status. Excluded all those women who have different disorders and diseases such as nervous disorders, digestive disorders and other problems. RESULTS: The prevalence of Severe depressive symptoms were found at 12-16 weeks of gestation, 79%, at 22-26 weeks 11%, and at 32-36 weeks 63%. Moderate depression was 20%, 44% & 31% in first, second & third trimesters respectively, while Mild depression only reported in second trimester, 41% and in third trimester 4.8%. CONCLUSION: The prevalence of different prenatal depression signs like, feeling of sadness, mood swing, irritation and lack of concentration were found high in the first trimester, this might be related with variety of factor like unwanted and unplanned pregnancy, low education, previous history of depression, the occurrence of psychosocial stressors etc. These depressive episodes get better with the progression as women get use to of conditions with chances of reoccurrence of these episodes at the end of pregnancy that might relate with delivery & other socio-economic issues.

45 Rotational Field Quantum Magnetic Resonance (RFQMR)

Khurrum Khurshidi, Digital Dental Imaging Clinic

Purpose of Study: The purpose of the study is to evaluate the efficacy of RFQMR therapy in remyelization in cases of multiple sclerosis. The evaluation will be done based on MRI findings by clinical/neurological examination and by assessment of quality of life before and after completion of therapy. Introduction: Rotational field quantum magnetic resonance (RFQMR) is a technology that is made to highly complex quantum electromagnetic beams are delivered by a new computer controlled devices called ‘CYTOTRON’. The beam can be precisely controlled and focused on to tissues there in generating streaming voltage potentials. In osteoarthritis, this flow in the joints causes forced movement of hydrogen protons in the extra cellular matrix (ECM) due to the alteration in QMR spin in the hydrogen atoms and stimulates the chondrocytes. RFQMR is an effective method of treatment of osteoarthritis of the knee joint. Method of treatment: With radiologically severe osteoarthritis were recruited for the study. The condition of their knee joints was first assessed by X-Ray examination. Physical parameters such as height, weight, thigh girth, length ofibia, alignment of stability, goniometric and dynamometric measurements were carried out. Goniometric measurements included evaluation of flexion, range of movement, extension leg, lateral and anterior posterior stability. Dynamometric evaluation evolved assessment of extension power of each leg measured with weight in the multigim. These measurements were made before and after treatment. After the completion of 21 exposures the patients were re-assessed radiologically and by other parameters. There were based on inputs for the Knee Society Scoring System. Result: The knee society score consisting of P, TKS, TFS and ROM were analyzed. According to the Knee Society scoring P has maximum scale of 50 for ‘No Pain’, the TKS has a maximum scale of 100 being ‘The Best’, TFS also has a maximum scale of 100 and ROM has a maximum of 25 indicating ‘Normal or Maximum’ range of movement. Conclusion: Younger subjects had earlier subjective and objective relief, which was almost complete at 21 days. Subjects with lower pain scores (i.e. more pain) showed greater subjective improvements. No gender difference to treatment was seen. No significant difference in status at the end of treatment and at one month was noted. Exposure of the knee cartilage to RFQMR is an effective method of treatment and can be a new line of treatment for osteoarthritis.

46 Salmonella Carrier State in Food Handlers Of Karachi Food Streets

Taranum Raba Siddiqui, Safia Bhihi, Muhammad Ayaz Mustafa.
Pakistan Medical Research Center-Jinnah Post Graduate Medical Center

Introduction: Salmonellosis comprises of typhoidal and non-typhoidal infection. Salmonella typhi and para-typhi A & B cause typhoid fever while non-typhoidal salmonella causes food poisoning. Purpose of the study: Salmonella carrier food handlers are the main source of transmitting Salmonella infection on mass scale. The purpose of the study was to determine carrier rate and antimicrobial susceptibility pattern of typhoidal and non-typhoidal Salmonella species among food handlers in Karachi. Setting: Five different randomly selected towns of Karachi city were visited. Methods: This cross sectional study was conducted from January 2011 to January 2012. A total of 220 food handlers were recruited from food streets of randomly selected five towns of Karachi. Three consecutive stool samples were collected from each food handler in Carry Blair transport media. Culture, biochemical identification, stereotyping and sensitivity test were performed. Statistical analysis was
done on computer package SPSS 17.0. Results: Out of 220 food handlers, 209 consented to participate and among them 19 (9.1%) were positive for Salmonella species. Serotyping of these positive isolates showed that 9 (47%) were typhoidal species while 10 (53%) were non-typhoidal. Of the typhoidal species, 7 were Salmonella typhi and 1 each of Salmonella paratyphi A and B. The resistance pattern of these isolates showed 89.4% to Ampicillin, followed by 26.3% to Cotrimoxazole, 15.7% to Nalidixic acid and 5.2% to Chloramphenicol and Ceftrixone/Cefixime each. All 19 isolates were sensitive to Ofloxacin. Conclusions: Carrier rate of both typhoidal and non typhoidal Salmonella in food handlers was 9%, (4.3% typhoidal and 4.7% non-typhoidal species).

47 The Socio-Economic Impact of Cancer on Patients and Their Families in a Developing Country
Zeeshan Yousuf, LUMHS

Introduction: Cancer is preventable with existing modern screening methods. The pilot study will contribute to a better understanding of socio-economic problems faced by families of cancer patients in developing countries. Objectives: To assess the socio-economic impact of Cancer borne by patients and their families in a developing country. Methods: A pilot study was carried out by conducting a survey of Cancer patients visited Nuclear Institute of Medicine and Radiotherapy Jamshoro (NIMRA) in 2010. A pre-tested questionnaire was used and convenient sampling method was adopted to collect the data. Impact of cancer disease in 5 domains of patient’s life: Employment, Income, Household, Budget, Access to Healthcare and family support was observed. Results: The data was collected from 60 diagnosed patients of Cancer. The mean age of patients were 43.5 years, among them, males were 48.3% and females 51.7%. About 25% of cases were suffering from breast cancer, 20% from mouth cancer and 10% form abdominal cancer. The cost of treatment was ranging from 100 US$ to 2500 US$. Mean daily cost of treatment was 15US$. 85% were compelled to borrow the money for treatment from son, father and husband. 99% patients desired to fight against disease till death. Only 20% patients were employed. About 53.3% patients shared that their family is disturbed due to disease. Conclusion: The socio-economic impact of cancer should be considered, as it may have negative impact on treatment compliance. Policies should be developed to have effective social support system for Cancer patients.

48 Surveillance of Surgical Site Infections in General Surgery Ward of a Tertiary Care Hospital of Karachi.
Safia Bibi, Ghulam Asghar Channa, Taranum Ruba Siddiqui, Waqaruddin Ahmed, Research Officer, PMRC Research Centre, JPMC, Karachi

Introduction: Surgical site infections (SSI) are common nosocomial infections in operated patients, surveillance is the first step towards controlling these infections. Purpose: To determine the frequency and risk factors of SSI in a tertiary care hospital of Karachi. To study the common bacterial pathogens causing SSI and their sensitivity pattern. Methodology: A cross sectional study of 1-year duration was conducted in the surgical ward of JPMC. Data regarding patient’s demographics, type of surgery, prophylactic antibiotic and co-morbid was collected on a predesigned Performa for patients who underwent surgery in the selected ward. Patients were followed for 1-month after surgery to determine the frequency of SSI. Culture and sensitivity was performed for infected patients. Results: Total 1120 surgical procedures were performed in selected ward during the study period, 82 (7.3%) patients developed SSI. Age, electivity of procedure, wound class and diabetes were found to be main contributing factors to SSI. Frequency of infection in clean, clean contaminated, contaminated and dirty procedures was 1.5%, 2.5%, 6.5% and 21.4% respectively. Pathogen could be isolated in 52(73.2%) patients. The most commonly isolated pathogens were E.coli (33.8%), Ps. aeruginosa (16.9%) and S. aureus (15.5%). E.coli isolates showed 100%,93%, 32% and 12% resistance to ceftriaxone, ofloxacin, amikacin and meropenem respectively. Pseudomonas aeruginosa isolates were 100%, 91.6%, 83.3% and 66.7% resistant to Ceftazidine, Ofloxacin, Meropenem and Amikacin respectively. S. aureus exhibited maximum resistance to cloxacillin (100%) followed by ofloxacin (90.9%), Amikacin (45.5%) and Vancomycin (0%). Conclusion: Frequency of SSI was higher in surgical ward of JPMC as compared to developed countries. The situation is further worsened by increasing frequency of multidrug resistant (MDR) organisms.

49. Psychological stress leading towards Migraine in Karachi
Shamoon N., Sadaf A., Huma K., Rida N. Javeria I. & Mudasir A

Introduction: the mental and physiological stresses can be an important trigger of migraines & headaches. These strains act to enhance the progression of migraine that could be psychological, physiological stress, Environmental stress or Chemical stress. Methodology: The population data of 185 people have taken which include the ages from 14-60 years. The data were analyzed by ICHD-II criteria. The duration of the research was from February 2012 to December 2012. The targeted population were of both genders age ranges 18-25 Yrs. The data have collected in two parts, before examination and during examination. Result: The obtain result shows that the frequency of migraine is higher in women as compare to men. Mostly people were suffering from mild psychological stress that might be periodical stress as approximately 50% people were students who were under examination stress as the exams were about to held. Nutritional stress is another major factor as the high temperature causes dehydration resulted in vasoconstriction resulted in sensation of pain. Environmental stress was an additional cause for students. Physiological stress was also noticed as the main cause that bring about the initiation of migrainesperiod whether it could also leads towards the Menstrual migraine that has a sign of vomiting or
nausea.

**Prevention**: individual concerns with healthy life patterns and stress free conditions could help a person to reduce or prevent the migraine.

---

### 50 Comparison of Greulich-Pyle and Golden-Girdany methods: which method should be employed for the estimation of skeletal age in Pakistani children?

**Muhammad Awais**, **Naila Nadeem**, **Yousaf Husen**, **Abdul Rehman**.

1. Principal and corresponding author
2. Department of Radiology, Aga Khan University Hospital, Karachi
3. Intern, Aga Khan University Hospital, Karachi

**Introduction and rationale**: Accurate skeletal age (SA) estimation is indispensable for social, medical, legal and medicolegal purposes. In Majority of hospitals in Pakistan, both Greulich-Pyle (GP) and Golden Girdany (GG) methods are being employed simultaneously for SA determination. No study, however, has been published scrutinizing the utility of these two methods in accurately estimating SA. In doing so, we may justify or discourage simultaneous use of these methods, thus helping reduce patients’ financial burden and radiation exposure. **Materials and methods**: For this retrospective study, children up to age 20 years referred for determination of SA from 1st May, 2011 to 31st May, 2012 were included. X-rays were interpreted using both methods by two consultant pediatric radiologists, who were blinded to chronologic age (CA) of children. **Results**: A total of 283 children were included. There was no significant difference in mean SA estimated by GP and mean CA for female children (p=0.434). However, a significant difference existed between mean CA and mean SA estimated by GG for females (p=0.005). In male children, statistically significant difference existed between mean CA and mean SA for both GP (p<0.001) and GG (p<0.001) respectively. There was a stronger correlation between mean CA and mean SA estimated by GP (r=0.938 for girls, r=0.916 for boys) as compared to GG method (r=0.907 for girls, r=0.867 for boys). **Conclusion**: GP was accurate in estimation of SA in female children as compared to GG. However, both methods were inaccurate in estimating SA in boys. Overall, there was better correlation between GP and CA as compared to GG. As GG method was not accurate in estimation of SA in children of either sex and had a weaker correlation with CA than GP, therefore it should not be used for SA estimation in Pakistani children.

---

### 51 Pre and Post donation Hematological values & Calcium level in platelets aphaeresis of healthy individual


1. Dow Institute Of Medical Technology, 2 Dow institute of hematology, 3 Dow institute of Basic Medical sciences

**Background**: In recent years platelets Aphaeresis technique is widely used for obtaining large yield of platelets to defeat the demand in thrombocytopenic patients. The research team plan to case control prospective study to observe the effect of platelets Aphaeresis on donor Hematological and Biochemical parameters. **Objective**: To determine the changes in hematological values pre & post platelets Aphaeresis. To assess the effect of acid citrate dextrose (ACD) on serum calcium ion concentration after the Aphaeresis of platelets of healthy donors. **Material & Methods**: The data was analyzed on SPSS statistical package version 16.0 (USA). 105 Healthy subjects were selected; data was collected from Karachi after complete history & screening from subjects. The platelets aphaeresis procedure was performed on three different cell separators. Pre and post donation Hematological values i.e. hemoglobin (Hb), Hematocrit (Hct), White blood cells (WBCs), Platelets (Plt), Mean platelets Volume (MPV), Platelets distribution width (PDW), Platelets large cell Ratio(P-LCR), and Plateletcrit (Pct); and calcium ions concentration were measured among all donors. **Results**: The study revealed post donation significant decrement in Hb concentration, Hct, Platelets count, Pct and serum calcium ion concentration and there is no significant changes in WBCs count, MPV, and P-LCR were observed. **Conclusion**: Although no clinical manifestation is observed in donors with significant differences in hematological and biochemical parameters but based on the results of this study it is recommended to redefine the selection criteria especially platelets count for platelets Aphaeresis in the population of Karachi Pakistan to ensure health safety of the donors and further study are required to validate it.

---

### 52 Bone Mineral Density and fracture Risk Assessment in Type II diabetic Patients

**Atif Mahmood, saima Ejaz, Sheerem Jaweed, Dr. Nighat Mannan,Tallat Naz**

Department of Physiology, Dow International Medical College, Dow University of Health Sciences

**Hypothesis**: Fracture risk is not associated with BMD in Type II diabetic patients. **Objectives**: To assess BMD and its association with fracture risk in elderly type 2 diabetic patients by using Fracture Risk Assessment Tool as a standard predictor of fracture risk. **Methodology**: A case control study was conducted on a purposive sample of 252 type II diabetic and non diabetic patients from different health care centers of Karachi. The participants were asked to fill a detailed questionnaire about their personal, present and past medical history and risk factors of osteoporosis were assessed. Type II diabetics with a history of at least 3 years were included in the study. Patients with history of drug and hormone intake that affects bone metabolism or any disease or surgery involving any joint; cancer and renal failure were excluded from the study. BMD measurements were done by Bone Densitometer (SONOST 3000). BMD was calculated by combining BUA and SOS which yields the QUI index. Calcaneous bone of right heel was used for measurement. T scores were used to evaluate BMD and risk of osteoporosis and Osteopenia were assessed by FRAX tool. **Results**: The mean age of the diabetic patients was 60.16% (±
8.06) years whereas 59.8 (± 6.2) years in non diabetic patients. Mean BMI among diabetic patients was 25.9 ± 5.7 kg/m² while 24.4 (± 4.43) kg/m² was in non diabetic patients. Mean waist/hip ratio of the diabetic patients was 0.93 (± 0.11) while of non diabetic patients was 0.89 ± 0.087. The mean SOS and BUA in diabetic population was 1509 (± 21.12) and 81.23 (± 16.725) while in non diabetic was 1414 ± 30.5 and 71.88 ± 13.73 respectively. Of the respondents, 13.1% were males and 86.9% were females. 14.3% were single, 82% were married and 3.8% were widow. 3.6% of the respondents had a past history of smoking while 93.4% never smoked in life. 30.5% had a family history of osteoporosis and 69.5% didn’t have a family history of osteoporosis. The major osteoporotic fracture risk and hip fracture risk was 9.3 ± 7.26% and 7.1 ± 5.2% in diabetics whereas 2.6 ± 0.5% and 1.3 ± 0.4% in non diabetic patients respectively. A weak negative correlation (-0.32) has been observed between BMD and Hip Fracture risk among diabetic patients. **Conclusion:** Type 2 diabetic patients have increased risk for hip fractures despite of higher BMD.

53 Study On Affectes Of Risk Factors & Treatment Strategies For Osteoarthritis In Karachi Comparing To Other Countries & Effects And Uses Of Glucosamine & Chondroitin Sulphate In The Treatment Of Osteoarthritis

**HAFSA QASIM JANGDA (DCOP-DUHS)**

**Study objective:** The purpose of this study is to evaluate the risk factors & treatment strategies for osteoarthritis in Karachi by comparing to other countries & the effects & uses of glucosamine & chondroitin in the treatment of osteoarthritis by different institutes across the world. **Introduction:** Now-a-days Osteoarthritis is the most common disease that is affecting billions of people across the world. This occurs due to biochemical breakdown of articular (hyaline) cartilage & destruction in synovial membranes of joints. Glucosamine and chondroitin sulphate are natural substances found in and around the cells of cartilage. Researchers believe these substances may help in the repair and maintenance of cartilage. In addition, glucosamine inhibits inflammation and stimulates cartilage cell growth, while chondroitin sulfate provides cartilage with strength and resilience. **Methodology:** A survey was conducted in which a structured questionnaire was filled by the subjects in the presence of the study researcher to evaluate the risk factors & treatment with their effects on patient’s lifestyle. **Results:** From the survey results & online research results from the rest of the world, & especially the use & awareness about glucosamine & chondroitin was also compared. The survey was conducted from December 2012 to January 2013 among 445 subjects (126 males & 319 females) **Results:** The most common reason for osteoarthritis found was the over weight of patients that is 90.56%. Age related factor effects prevalence in males above 50 year was 94.44% & in females above 40 years was 95.9%. Inherited disease was 84.7%. Previous bone disorder & surgery induced in 11%. Bone infections 6.5%. Menopause was found to affect the most in females which was 93.73%. Symptoms included were, muscle weakness & fatigue 97%, swelling 98.2%, Exercise done only by 28% & 93.7% individuals suffer from pain affecting their routine activities in which 3.59% suffered from mild pain, 38.2% from moderate & 58.2% from severe joint pain. 100% individuals used allopathic treatment, along with 11.95% herbal & 15.5% used homeopathic medications. Drugs prescribed were analgesics (oral/topical) 100%, NSIAD'S 100%, muscle relaxants 98.42%, intra-articular corticosteroids 74.6%, and sodium hyaluronate 27.19%, opioids 24%, SNRI'S 70%, CALCIUM & VITAMIN D supplements 100%, & glucosamine with chondroitin sulphate only 4.9%. Non pharmacological treatment included were, hot/cold applicators 29.88 %, braces/bands/support 83.1%, and physical therapy 18.4%. Pain intensity reduced in 70.56% patients, & 71.46% had improved their activity in which 40.25% had well, 50.3% had better & only 9.43% had best improvements. While 11% gone towards joint replacement surgery. Only 46.5% were very much satisfied with treatment, 34.6% moderately satisfied & 18.87% were not satisfied, & those who used glucosamine + chondroitin were completely satisfied & also had the best improved routine activities. Comparative studies also shown that in other countries researches prove that glucosamine & chondroitin sulphate have prominent positive effects in patients of osteoarthritis. **Conclusion:** From the survey results & online research conclusion can be made that obesity, age, genetic history & menopause (females) were major reasons for osteoarthritis. Intensities of pain were compared with their affects on routine activities. The need to promote daily exercise is also there. Treatment according to class of drugs was evaluated. Improved activity with treatment satisfaction also reported. & by comparing studies we can conclude that glucosamine & chondroitin sulphate can be a revolutionary treatment in osteoarthritis in our country like the rest of the world but there is the need for knowledge concerning use of glucosamine & chondroitin sulphate still exists and it needs to be addressed by health care professionals and health related educational programs.

54 ABO in relation with Secretor and non Secretor status in young individuals: A Preliminary study in Karachi-Pakistan.

**Sikandar Khan Sherwani, Shazia Akbar, Syed Hani Abidi, Haroon Ahmad, Sajjad Alam Zaidi and Mirza Tasawar Baig and Khalid Hassan**

**Department of Microbiology-Federal Urdu University-Karachi-Pakistan**

**Introduction:** Blood group antigens are secreted by the secretors into various body fluids. Non-secretors put out very minor or none of their blood group antigens into different body fluids. Increased degree of protection against bacterial fimbria lectins may be associated with the secretion of the antigen into saliva and mucus. Secretors are more prone to hemolytic anemia, oral cancer and viral infections that have been proved by previous studies. Whereas; secretors have greater risk for diseases like tuberculosis, rheumatic fever, juvenile diabetes. The aim of the study was to find out the secretor and non-secretor status in the population. **Material and methods:** In this study, a total number of 550 volunteers, of both genders were randomly selected.
who aged in the range of 20–26 years, 300 females and 250 males, with apparently healthy status. After taking consent at the Department of Microbiology, Federal Urdu University of Arts, Science and Technology for the sake of screening of blood group and identifying their secretor-non secretor status. Blood grouping was done by tile method. Then, approximately 3 ml of blood was taken in a dry sterile test tube at room temperature and serum was separated and 5% cell suspension was prepared for ABO blood grouping. Then collection and processing of saliva was done from the volunteers’ as they were asked to rinse the mouth thoroughly with distilled water and as a result approximately 2-3 ml of saliva was collected in a sterile tube. This tube containing saliva was then kept for 5-8 minutes on a water bath to denature the salivary enzymes. Centrifugation was done for 5 minutes at 1000g and then later supernatant was separated. Saliva was subjected to develop a triple layer system for determine Secretor-non secretor status by haemagglutination inhibition. Results: The results for men indicate that the 88, 187, 66 and 59 participants had blood groups A, B, O and AB respectively while the blood group distribution in females was 88, 124, 5 and 10 for A, B, O and AB respectively. It also indicated that the majority of the participants were Rh +ve than –ve. As, far as secretor, non secretor status is concerned, 280 females were found secretor and 230 males were found secretors. Conclusion: In this preliminary study, though a short population were selected especially young individuals, but very necessary to determine and develop the database regarding blood grouping secretor and non secretor status that could be helpful in various ways.

55 To Assess the Level of Stress in MBBS Students of RMC
Ahmad Iftikhar & Omer Farooq Bangash, Rawalpindi Medical College, Rawalpindi.

Purpose of study: To assess the level of stress in MBBS students of RMC. Introduction: Stress is that external factor that cause wear and tear of body, although mild stress can increase the creativity but relentless demands of medical education can affect student’s learning, behavior, patient care and ultimately affecting whole community. Methodology: Study was carried out in 200 students of all five classes of RMC by convenient quota sampling and applied cross sectional study method. Kessler’s stress inventory 10 was used. RESULT: Our recent statistics shows that 61 % students were under stress and among them 25.50 % students were in severe stress. Severe stress in female students is 33% vs. 18% in male students. Severe stress in first year 42 %, which was highest among all years. 19.58% boarders were in severe stress and 31.06% non-boarders were under severe stress. CONCLUSION: We recommend that every medical school should provide a counselor and psychologist to students where they can check in, get themselves counseled and get psychotherapy if needed. Basic sciences teachers should create a student friendly environment. Students should be periodically screened for stress and depression and potential students should get counseling, psychotherapy or treatment to produce a healthy community.

56 Prevalence of Self-Medication among Medical Students of a Private Medical College
Syed Muzaffar Hasan Kirmani, Muhammad Usman Malik, Muhammad Usman Warraich Rashid Latif Medical College, Lahore.

The purpose of study: A survey was carried out to re-conceptualize the circumstances, in which medical students practice self medication and temporal behavior observed in doing so. It was also aimed to guide them, not to use any kind of medicine without a Doctor’s advice. Introduction: Self medication refers to the use of any medicine on one’s own, without consulting an authorized practitioner. The medicine used may be brought from a Pharmacist, or using old left over medicine. Methodology: The survey was based on a questionnaire which was distributed among the medical students of a private medical college. It was carried out from December 2012 to January 2013. A total of 100 students responded to the questionnaire; 46 Males and 54 Females. Data was compiled to obtain the results. Result: The data obtained provided convincing evidence that 78 students carried out self medication. Amongst them 72% had a Doctor in their family and 90% of these 72% looked forward to their advice. They also suggested it to their friends and relatives. 75% said that they had never faced any complication while practicing self medication. Only 91% of the students looked for the expiry date before using medicine. Conclusion: Majority of the students carried out self medication for management of minor ailments; headache was the most prominent. They feel comfortable in practicing self medication because the previous experience stood effective. Most of the students got information about the medicine, from the doctors. Those who did not practice self medication and had a doctor in their family looked forward to their advice.

57 Depression in Cancer Patients Undergoing Chemotherapy
Kanwal Saleem, Ayesha Asif, Qazi Faraz, Misbah Siddiqui, Aisha Seher and Muhammad Afzal Sindh Medical College, Dow University of Health Sciences, Karachi, Pakistan

Aims and Objective: This study aimed to investigate the presence of depression in cancer patients undergoing chemotherapy. Introduction: Chemotherapy is a term for any drug/chemical agent given to stop cancer cell growth. Unfortunately the drugs cannot differentiate between cancer and other normal cells, killing not only cancerous cells but also healthy cells which results in a number of side effects including hair loss, nausea, vomiting, and diarrhea. It is observed that chemotherapy also affects psyche of patients leading to depression. Materials and methods: A Cross-sectional study was performed on 206 patients visiting Oncology Department of Jinnah Postgraduate Medical Centre. The patients were evaluated for depression using Major Depression Inventory Scale (MDI-10). Patients were interviewed while they were in outpatient clinic and day care. Statistical
analysis was carried out using t-test, Anova and SPSS. **Results:** Out of 206 patients who participated in the research, 80 were men (38.8%) and 126 were women (61.2%). According to the level of depression, 24.3% patients experienced normal level of depression, 20.4% mild, 5.3% moderate and 50.0% severe depression. Regarding the process of chemotherapy the level of depression was higher in the daycare patients as compare to admitted patients. Moreover, patients who had family history of cancer and death in family due to cancer experienced higher levels of depression. **Conclusion:** The study suggests that depression is a major side effect of chemotherapy. All the patients undergoing chemotherapy should be psychologically evaluated as specific interventions may improve the frequency and severity of depression during chemotherapy.

### 58 Evaluation of Antibiotic Self-Medication Pattern amongst University Students of Islamabad, Pakistan

**Muhammad Paras Javed, Medical Student, Riphah Institute of Pharmaceutical Sciences, Riphah International University, Islamabad, Pakistan.**

**Introduction:** Self medication is the act of consuming medicines for prevention or treatment of disease without consulting professional supervisors, which comprises of acquiring medicines without prescription or taking medicines on advice of others. There is much public and professional concern about the irrational use of drugs. **Purpose of study:** The objective of this study was to evaluate the prevalence of self-medication among undergraduate and graduate students in Islamabad.

**Methodology:** A self-designed researcher administered survey of 209 participants studying over different universities with variety of subjects in Islamabad on their perception of self-medication of antibiotics. **Results:** A high proportion of students 77.03% self medicate themselves. Majority of students 59% reported that they self medicate for respiratory tract infection and skin infections. Greater numbers of students 33.63% have knowledge about drugs. Most frequently used antibiotic was amoxicillin with 48.58%. 46.79% of the respondents purchased drugs directly from drug stores. 52.17% reported self-medication to be effective. **Conclusion:** This study shows that self medication with antibiotics is widely common and inappropiate in some Pakistani Universities. With these results, it is believed that health policy makers will take appropriate steps to prevent antibiotic misuse and further strengthen the legislation governing the sale of prescription drugs without prescription.

### 59 Impact of Family History in Development of PCOS

**Sadaf Ahmed1&2, Shamoon Noushad1&3, Neelam Barkat1, Sidra Afzal1, & Zeeshan Fatima1**

1= Advance Educational Institute and Research Center, 2= Department of Physiology UOK, 3= Institute of Basic Medical Sciences, DUHS.

Polycystic ovarian syndrome is associated with number of metabolic disorder. We have conducted the study that is based on preliminary data, by interview, biochemical evaluation and clinical examination. We evaluate the correlation of family history of diabetes and obesity in women of reproductive age diagnosed with PCOS in gynecology ward MOTHERCARE, in order to accurately determine the prevalence of PCOS, as defined by current endocrinological criteria, among first-degree relatives of affected patients and to determine the overall accuracy of proband-only and family member (self report) interview for the detection of clinically evident PCOS within families. A positive family history of diabetes and obesity was strongly associated with metabolic characteristics associated with an increased risk for PCOS. Overall, our data suggests that PCOS is a familial disorder, family history can be considered as an important factor determining the risk of developing PCOS. Our preliminary data indicate that a woman’s risk of developing PCOS is ~90% if she had a family history of diabetes and a woman’s risk of developing PCOS is ~80% with obese family history. Suggesting that the inheritance of PCOS may be preferentially paternal, although expanded clinical studies will be required to confirm these findings. Considering PCOS to be a dominant genetic disorder with a high degree of expressivity, we propose that the risk of developing the disorder is governed by family history and the degree of exposure to the selected environmental and/or other genetic influences.

### 60 Correlation of dietary patterns and social activity with Health Related Quality of Life (HRQoL) of PCOS patients

**Neelam Barkat1, Sidra Afzal1, Zeeshan Fatima1, Sadaf Ahmed1&2, & Shamoon Noushad1&3**

1= Advance Educational Institute and Research Center, 2= Department of Physiology UOK, 3= Institute of Basic Medical Sciences, DUHS.

Stein-leventhal syndrome now known as Polycystic ovary syndrome (PCOS) occurs when ovaries unable to release eggs lead to an increase in testosterone. According to US statistics PCOS affects about 6-10% of women internationally, whereas in Pakistan approximately 5% of women (4 million women) have PCOS. Mainly PCOS is diagnosed in women age ranges from 20-40, with lesser incidence among teenage girls in their reproductive age. It has been reported frequently that PCOS affecting the lives of young unmarried girls in terms of obesity as the key physical symptom with dietary patterns having immense impact on development of PCOS as macronutrient intake causes abnormal weight gain along excessive stimulation of hunger and carbohydrate craving. Other negative effects including hirsutism, psycho social pressure with poor quality of life, higher level of depression, psychological morbidity, poor body image, feeling of inferiority, embarrassment, socialphobia and less
romantic contentment. These multiple clinical conditions can be amended. Foods that contain anti-inflammatory compounds have impact on improvements in the androgen profile of PCOS patients. PCOS reduces HRQoL, regardless of ethnicity and differences in the normative baseline. HRQoL was worse in those with PCOS in the areas of general health perceptions, behavior, physical functioning and family activity.

### 61 Incidences of Developing Eating Disorders Due to Binge Eating.

Sadaf Ahmed\(^1\&2\), Samrah Faizan\(^1\), Javeria Ismail\(^1\), Shamoon Naushad\(^1\&3\), Zain Azher\(^1\)

\(^1\) = Advance Educational Institute and Research Center, \(^2\) = Department of Physiology UOK, \(^3\) = Institute of Basic Medical Sciences, DUHS.

**Introduction:** Binge eating or chaotic eating refers to unhealthy eating patterns that are found in low incidence as compare to verified and diagnosed eating disorders but altered eating behaviors may lead to severe eating disorders like Binge Eating Disorder and Bulimia Nervosa that could be life threaten if left undiagnosed. **Purpose of study:** To investigate unordered or binge eating attitudes among individuals with respect to their eating patterns. To examine the association between bowel movements and the frequency of food intake at different intervals. Moreover, to figure out particular food stuff that mostly individuals consume during munching, also which type of food preference has been given in between junk and homemade food. **study design:** An observational study has been done in which a randomized data of 120 individuals has been selected within a group of males and females by the help of a questionnaire based survey on food habits, preference of type of food intake, having tea and munching habits. **Results:** 58.3% of the individuals including both genders did not have feeling of fullness, while 38.33 % feels full early in the beginning of food intake. On the other hand 22.60% individuals were not influenced by the smell of food and 71.60 % feels full in the influence of smell of food. 50.83 % of the total individuals possess munching habit. Unordered eating patterns also affect frequency of bowel movements, 58.30% people have bowel movements once a time whereas 31.60% had twice daily while 4.16 % had more than three times a day. **Conclusion:** Irregular eating and munching habits does not initiate feeling of fullness in the beginning of meal, due to binge eating people do get satisfied by smell of food but did not take proper meal to fulfill their nourishment requirements. However, binge eating lead to increase appetite as the munching material including snacks digest quickly which cause more food intake. Binge eating affect appetite, eating attitudes and Bowel movements which may further lead to severe eating disorders like Bulimia Nervosa which should be clarify early instead left undiagnosed.

### 62 Do Adversities Can Lead To An Improved Self Esteem??

Ahmed Faiza\(^1\), Samrah Faizan\(^1\), Shamoon Noushad\(^\text{1&2}\) & Sadaf Ahmed\(^\text{1&3}\)

\(^1\) = Advance Educational Institute and Research Center, \(^2\) = Institute of Basic Medical Sciences, DUHS.

**Introduction:** The self-esteem, however, is something more fundamental than the normal ups and downs associated with situational changes. For people with good self-esteem, normal ups and downs may lead to temporary variations in how they feel about themselves, but only to a limited extent. Self-esteem can have a big part to play in how you feel about yourself and also how much you enjoy things or worry about things. **Purpose:** The objective of this study was to find out that the self – esteem among young population of Pakistan. **Methodology:** The data was collected by the help of Rosenberg self esteem scale from 110 subjects from all over Pakistan. The age group included in this study was 18-30 years. Both the genders were asked question regarding their daily life (feelings). **Results:** 80% respondents belong to middle class, and they were students, according to Rosenberg’s self-esteem scale 92% of the respondents were highly motivated & determined. **Conclusion:** In this study we concluded that most of the individuals were from middle class and still studying. We found out that the young population we targeted has a high self-esteem. They are motivated and determined. We figured out that due to the daily riots and chaos in the country, bad economy and stressful conditions are found to be the motivating factors that raise the level of self-esteem in our population. Balanced self-esteem raises one’s confidence to do the right things. However, high self esteem reflects more aggressive and violent behavior.

### 63 Association of Hypertension with Chest Pain and Respiratory Problems in MI Patients.

Sana. T., Shamoon. N., Sadaf A, Tahir S & Asma Z.

\(^1\) = Advance Educational Institute and Research Center, \(^2\) = Institute of Basic Medical Sciences, DUHS.

Myocardial Infarction (MI) or Heart attack may occur as a result of many baseline maladies that can lead to death of cardiac muscles and ultimately leads to the ischemic condition and symptoms of heart attack. Most commonly reported symptoms of Heart attack /ACS are chest tenderness, squeezing of chest wall, breath shortness and headache. Hypertension is strongly associated with high blood pressure and family history of heart attack before age of 60 is consider as an independent risk
factor for Coronary Heart disease. A cross sectional survey is conducted from 110 patients of KHID (Karachi institute of heart disease with diagnosis of ACS,NSTE-MI,STE-MI & SVT. We include the MI patients of previous heart attack or angina pectoris history admitted in KHID. MI Patients without previous heart attack or angina history were excluded.Fifty seven percent (57%) of patients have positive family history of heart attack/atherosclerosis while forty one percent (41%) patients report hypertension as a sign of heart problems from one to ten years (1-10) , twenty six percent (26%) of patients report hypertension from less than one year and thirteen percent (13%) reported from ten to twenty years. Most commonly reported symptoms of these patients were chest pain or chest tenderness with the occurrence of thirty six % mild cases and twenty eight percent severe cases. Second most common symptom was respiratory issues with the occurrence of twenty eight percent mild cases and thirty three percent severe cases. Patients also frequently complain about Headache and depression along with Nausea. The survey results indicate that the main cause of heart attack or angina pectoris is positive heart attack family history along with occurrence of hypertension for more than 2 years. Most frequently reported symptoms are respiratory problems during stress or exertion, chest pain and headache.

64 Significance Of Radiographer Awareness In Pneumothorax Detection

Saima Khan¹², Sadaf Ahmed¹³, Shamoon Noushad¹⁴ & Kishore Raja²

1. Advance Educational Institute & Research Center
2. Aga khan University Hospital
3. University Of Karachi, Department Of Physiology
4. Institute of Basic Medical Sciences(DUHS)

Objective: The purpose of the study is to aware and educated a radiographer of certain pathological conditions seen on chest x-ray specifically we are dealing with types and severity of pneumothorax and the quality of information a radiographer communicate to his primary team for evaluation. Introduction: Radiographer can identify or detect pneumothorax by taking x-rays in three positions i-e upright, supine or decubitis with complete awareness of diverse conditions of pneumothorax. For suitable imaging radiographer should know about position, safety of the patient and the techniques of Breath holding during exposure. Whereas ALARA (as low as reasonably achievable) should be kept standard. In our study mostly cases were of tension pneumothorax in which immediate decompression of thorax is mandatory and it requires instant action as on x-ray film as lung marking diminishes in this condition. Methodology: According to radiological policy for panic conditions the chest x-rays were observed through PACS after every two hours. We evaluated the role of radiographer in observing pneumothorax and how it is his/her utmost responsibility to inform their primary team or the concerned radiologist urgently. Result: We observed 36 panic pneumothorax out of 2865 portable chest x-rays of admitted patients from May 2012 till November 2012. Out of these 36 cases radiographers correctly identified 28 cases while 6 were missed when compared with radiologists’ detection. Conclusion: We concluded that 77% of radiographers are aware of panic conditions detected on chest x-ray but we find it very necessary to aware and educate radiographers more particularly to detect pneumothorax and related pathologies on chest x-rays in order to improve proper patient care in health care system and maintain required standards.

65 Good Clinical Practice; Education as a Necessitate For Radiology.

Sadaf Ahmed¹², Shamoon Noushad¹³, Samrah Faizan¹, Javeria Ismail¹, Saima Khan¹⁴ & Kishore Raja²

1. Advance Educational Institute & Research Center
2. University Of Karachi, Department Of Physiology
3. Institute of Basic Medical Sciences(DUHS)
4. Aga khan University Hospital.

Good clinical practice (GCP) is an ethical and scientific quality act from oldest enduring customs in the olden times of medicine. As the guiding ethical code it is primarily known for its edict to do no harm to the tolerant. However, the complexities of modern medicine research necessitate a more elaborate set of guidelines that address a physician’s ethical and scientific responsibilities such as obtaining informed consent or disclosing risks of these biohazards. The radiologists are important escort in the healing journey of any patient. our country in last decades excel so much in terms of offering training programes for these professional to bridge the gap between the therapeutic interventions and knowledge of these working individuals. We have done a survey on both male and female working in specifically hospitals in Karachi. They were interviewed about their skills, duties and knowledge about standards of clinical practice with reference to the patient care and conditions they were inquired about the medical background, awareness of the sufferer’s ailment and ethical concerns like patient safety & rights. We have found nearly disappointing results as most of these workers were ignorant of the fact that they lack basic knowledge of related responsibilities of concerned patients. Rest of the data also gave the evidence for a huge breach among the awareness, education and realistic approach in this selected workforce. We suggest that caregivers must be aware of indications and have strong medical foundation of the concerned departments where they are serving. We propose the medical education and clinical workshops of this set of serving individuals at ground levels along with the technical fine tuning with the help of case studies and good clinical practice.

66 Medical Social Work Practice in Karachi, Pakistan

Sakina Riaz, Department Of Social Work,University of Karachi
Social work is a profession for those with a strong desire to help improve people’s lives. It is a professional subject based upon scientific knowledge in skills in human relations. Medical Social Work is the branch of Social work which deals the problems of patients in health care Institutions. Medical Social Workers recognise that illness and admission to hospital may have a direct impact on the psychological, social, and emotional well-being of the individual and his/her family. Medical Social Work offers different services to patients and their families irrespective of caste, colour or any other difference, within the hospital. The role of the Medical Social Worker, therefore, is to offer counselling, support, and practical assistance to patients and their families or carers, who may be experiencing these difficulties during their hospital stay. In Pakistan, Medical Social Welfare officers are employed in hospitals to cater the need of poor and vulnerable patients in hospital. The objective of the study is to assess the role of Medical Social Welfare officers working. An exploratory qualitative study was conducted. A semi-structured interview guide was employed. The sampling was done by convenience. Inclusion criteria were Medical Social Officer working in different hospital. Seventeen Social Medical Officer were selected as sample for this study. Data were analyzed and interpreted by using percentage method. In this paper the, author have tried to identify the problems and prospects of Medical Social Work in urban Setting and put forwarded some suggestions for improvement in current scenario.

67 Antiproliferative and Cytotoxic Effect of NSAIDs [(RS)-2-(1,8-Diethyl-4,9 dihydro-3H-pyrano[3,4-b]indol-1-yl) acetic acid] on Hepatocellular Carcinoma Cell line

Aneesa Gul and Huma Rasheed, Dr. Panjwani Center for Molecular Medicine and Drug Research, International Center for Chemical and Biological Sciences, University of Karachi, Karachi, Pakistan.

Hepatocellular carcinoma (HCC) is the sixth most common malignancy and the third leading cause of cancer deaths worldwide. It is estimated that, approximately 550,000 new patients are diagnosed with HCC each year. HCC is most prevalent in the regions of Southeast Asia and the Sub-Saharan Africa. The processes of inflammation, regeneration, cirrhosis and accumulation of genetic alterations or chromosomal aberrations lead to the development of HCC. (RS)-2-(1,8-Diethyl-4,9 dihydro-3H-pyrano[3,4-b]indol-1-yl) acetic acid belongs to a group of non steroidal anti-inflammatory drugs (NSAIDs) and possess potent analgesic and anti-inflammatory activities. The cyclooxygenase enzyme inhibition by NSAIDs is responsible for the prevention of the transformation of arachidonic acid in to prostaglandins. NSAIDs have shown striking results as an anticancer agent. Various NSAIDs have shown anti-cancer effects on several cell lines such as colon, lung, mammary and prostate. The present study deals with the antiproliferative and cytotoxic effect of (RS)-2-(1,8-Diethyl-4,9 dihydro-3H-pyrano[3,4-b]indol-1-yl) acetic acid on human liver carcinoma (Hep G2) cells. Cisplatin was used as a standard drug. Hep G2 cells were cultured in high glucose DMEM supplemented with 10% fetal bovine serum and 1% antibiotic at 37 °C with 5% CO2 in 75cm2 flasks. The cells were treated with 100, 200 and 400 μM concentrations of selected drug. Cell viability and cytotoxicity were determined by trypan blue exclusion assay and cell titer blue (spectrofluorometry) assay respectively. The results indicated that (RS)-2-(1,8-Diethyl-4,9 dihydro-3H-pyrano[3,4-b]indol-1-yl) acetic acid possess a great potential in inhibiting the growth of cancer cells. The data shows that (RS)-2-(1,8-Diethyl-4,9 dihydro-3H-pyrano[3,4-b]indol-1-yl) acetic acid inhibited Hep G2 cell growth in a dose dependent manner. It is concluded that (RS)-2-(1,8-Diethyl-4,9 dihydro-3H-pyrano[3,4-b]indol-1-yl) acetic acid may be used as an effective chemotherapeutic agent for hepatocellular carcinoma treatment.

68 Awareness, attitudes and prevention of Malaria in the cities of Lahore and Karachi, Pakistan

Eman A. Khaled, Ali Javed Gilani, Awatif Khaled

Introduction: Malaria is the 2nd most prevalent disease in the country (HMIS, 2006) and remains a major threat, where 0.5 million cases occur every year. Methods: A descriptive cross-sectional study was conducted (April to June, 2012). Entire population indexed in the sampling frame was considered eligible for inclusion. 500 participants from each Karachi and Lahore were interviewed using a pre-tested questionnaire via convenient sampling and queried in a centered setting to reduce bias. Data was analyzed using SPSS Version 20.0. Results: Awareness: Karachi (80.2%), Lahore (73.2%). Acknowledgement of clinical features among the participants was variable with Fever by Karachi (55.2%) and combination of Fever and Vomiting by Lahore (63.4%). Over 66% of the participants from both cities acknowledged protective measures; with Sanitation elected 38.4% by Lahore and Insecticide usage 30.8% in Karachi. Counseling at a health facility (Karachi- 32.3%) and (Lahore - 50.8%). Karachi voted them responsible for the disease burden where as Lahore elected the government. Discussion and Conclusion: Majority interviewed agreed upon inadequacy of preventive programs. Malaria control strategy in Pakistan mainly relies on the use of repellants/coils. Practitioners do not provide individualized health counseling, leading to a range of misconceptions and a strong belief in the curative power of traditional medicine. Unless the facilities are cost-free, the poor will continue to fall victim to this killing menace. Combined with resistance observed with drugs, floods henceforth further trigger the challenges of malaria, particularly in Sindh and Baluchistan. The threat is unfortunately still rampant, killing one child every 3 minutes.

69 Antiatherogenic Effect Of Linum Usitatissimum Oil Consumption In Experimental Model

Sobia Azam, Ghazala Yasmeen, Labna Naz & Nazish Iqbal Khan
Department of Physiology, UoK
Background: Atherosclerosis is the primary cause of vascular ischemic disorders that has a complex pathophysiology initially identified by changes in plasma lipid profile. It also increases the systemic oxidative stress and the drug therapy usually induces hepatotoxicity so it is focused worldwide to discover non-pharmacological agents with lesser side effects. Objective: The present study was planned to investigate the antiatherosclerotic activity of *linum usitatissimum* Oil consumption in cholesterol-fed rabbits owing to its expected lipid lowering effect. Methodology: It was a case-control prospective study conducted at the department of Physiology, University of Karachi. Age matched 18 rabbits were randomly divided into three groups of equal size after one week of acclimatization. Base line values of plasma lipid profile, antioxidants and plasma transaminases were taken after over-night fast. Later the atherogenic diet was administered for about four weeks in group 2 & 3 followed by p.o. administration of 1.5ml/day *linum usitatissimum* along with atherogenic diet in group 3 for the same time period. Blood specimens were obtained and assayed for alteration in all fore-mentioned parameters at every dietary modification. p<0.05 is chosen as level of statistical significance. Results: The mark rise in serum cholesterol, triglyceride and LDL-C in cholesterol fed rabbits was significantly reduced by the administration of *flaxseed oil* while an insignificant rise in HDL-C and reduction in body weight is observed. The values of plasma transaminases were significantly reduced in treated group while the reduction in oxidative stress observed but did not meet level of significance. Conclusion: These finding suggest that *linum usitatissimum* oil possesses strong antihyperlipidemic effects and its dietary supplementation may be useful for the primary prevention trials against atherosclerosis and coronary heart disease.

70. Antihyperlipidemic Activity Of Coriandum Sativum Consumption In Cholesterol Fed Rabbits

Mehwish M. Raza, Ghazala Yasmeen, Nazish Iqbal Khan & Lubna Naz
Pathophysiology Research Unit, Department of Physiology, University of Karachi, Karachi 75270 Pakistan.

Background: Alterations in plasma lipid profile is one of the major factors contributing in the genesis of atherosclerosis and result in the cardiovascular disease. Mostly the pathological signs develop in the late stages when mark able damage has occurred. So the attention is being paid on the discovery of non-pharmacological agents that can delay the process in vulnerable groups. Objective: The purpose of present study was to assess the antihyperlipidemic affect of dried *coriandum sativum* powder consumption in experimentally hypercholesterolemic animals. Methodology: It was a case-control prospective study conducted at the department of Physiology, University of Karachi. Age matched 18 rabbits were randomly divided into three groups of equal size after one week of acclimatization. Base line values of plasma lipid profile and plasma transaminases were taken after over-night fast. Later the atherogenic diet was administered for about four weeks in group 2 & 3 followed by p.o. administration of 10% / day *coriandum sativum* powder along with atherogenic diet in group 3 for the same time period. Blood specimens were obtained and assayed for alteration in all fore-mentioned parameters at every dietary modification. p<0.05 is chosen as level of statistical significance. Results: The daily consumption of *coriandum sativum* powder significantly reduced serum cholesterol, triglyceride and insignificantly LDL-C in cholesterol fed rabbits. While the changes in HDL and plasma transaminases were found insignificant as compared with the control & hyperlipidemic groups. Conclusion: These finding suggest that *coriandum sativum* has antihyperlipidemic effects and its dietary supplementation may reduce or delay the process of atherosclerosis.

71. Proposal for Hospital Waste Management to help-out clean environment

Daniyal Yousaf, Dr Muhammad Ali Memon, LUMHS

Objective: Application of Hospital Waste Management to help-out clean environment in our set-up. Introduction / Background: Hospital Waste is one of the major source of environmental pollution and responsible for spread of many diseases. Hepatitis B & C are the commonest potentially lethal communicable diseases that can be spread through this vector. Hospital Waste may be of two types, non-Hazardous / domestic waste & Hazardous waste, Infectious waste is the target subject of this presentation. Hospital Waste Management (HWM) in well developed countries is successful in controlling many communicable diseases and also proved cost effective. Concept of Hospital Waste Management (HWM) in our set-up is non-existent, and difficult to be applied as in developed world. Material and method: A lot of work is being done by Environmental Protection Agency (EPA) Sindh and Social Sector Support Services (SSSS) in this region and preliminary reports have been published in 1992. 65 regional public sector hospitals were included in this study to collect waste and categorize in to infected & non infected waste and amount were calculated in a defined period. Results: In this study 65 hospitals were included to collect hospital waste. Total waste was 930.7 kg (100%), of which 620.35 kg (66.65%) was infected and 310.35 (33.35%) was non-infected. Conclusion: The infected waste is responsible for many diseases specially hepatitis B & C viral infections. These infections are one of the major causes of lethal diseases like Liver cancers.

72. Cardiopulmonary endurance in young adults

Maria Altaf1, Aayesha Ifitkhar1, Sharmeen Gohar1, Salman Zahid1, M.Owais1, Kisa Fatima Altaf2

1. FATIMA JINNAH DENTAL COLLEGE
2. DOW INSTITUTE OF MEDICAL TECHNOLOGY, DUHS

PURPOSE OF STUDY: The purpose of this study is to provide background information concerning the cardiopulmonary responses to physical exercise. INTRODUCTION: CPE is primarily a function of the heart’s maximal ability to pump blood (maximal cardiac output) and the ability of skeletal muscle to extract and use oxygen. Sedentary or inactive behaviors and low
levels of physical activity are important contributors to the increasing prevalence of obesity among children and adolescents. **METHODS:** Anthropometric indices were measured with standard techniques: weight by digital scales waist and hip circumferences were calibrated using plastic tapes. The waist was measured at the end of a gentle expiration from the umbilical region with the participant standing, and the hips were measured at the greater trochanter. Neck circumference was measured in the midway of the neck, with plastic tape. All circumferences were taken with the subjects standing upright, and shoulders relaxed. Aerobic fitness was assessed by using step up exercise for 3 min using stop watch. Pulse rate was measured at resting position and after exercise. **RESULT:** Result of my study shows that BMI, neck circumference and waist hip ratio are directly related to each other while cardiopulmonary endurance is reciprocal of them. **CONCLUSION:** Result of this study shows that obese subjects had poor performances on step ups and males were more physically active. Environment (the frequency, intensity, and duration of aerobic training) has a significant effect on CPE.

73. **Is Myopia exclusively Familial?**
Tuba Jamil, Fouzia Khalil, Asghar Ali, Izghan Ahmad, Dr.M.Jamil Sabit & Dr.Numan Majeed Rashid Latif Medical College, Lahore.

**Purpose of Study:** To evaluate whether only Familial factors are related to the onset of Myopia or environmental factors also play a role. Myopia is increasing day by day. **Introduction:** Myopia (Near-sightedness) is one of the most common disability occurring in our population. According to studies; it is associated with family background. **Method:** The cross-sectional study was carried out in two different private medical colleges of Lahore in January 2013. The questionnaire forms were administered to assess the various potential Myopia risk factors. **Result:** Of 50 students, 30 were females and 20 males. Mean age range was 18-25 years. Out of 50 students, 37 knew their how much weak their eyes were (power of lenses of glasses) while others didn't. 35 reported parental Myopia (majority Paternal). While only one student had accident in childhood which affected his vision. 32 students use to study in dim light due to load-shedding. 27 identified with darkness association and less exposure to daylight. 37 students have longer duration of Laptop / TV usage i.e more than 2hrs. 35 students have habit of close-up book reading and writing i.e less than 12cm. **Conclusion:** Prevalence of myopia was significantly associated with family history. Myopia may eventually develop in a person due to environmental factors.

74. **Clinic-based survey of drug dispensing practices: A reflection of current scenario**
Sadaf Jabeen, Amat-ul-Aziz, Javeria Waqar, Qurat-ul-a'ain, Qurat-ul-a'ain Azhar, Komal Mahmood Dow College of Pharmacy, Dow University of Health Sciences

Objectives: To analyze existing dispensing practices and patient satisfaction provided in private clinics of different localities in Karachi. We also aim to provide an overview for pharmacist and other health care professionals on enhancing medication dispensing practices that will result in improved continuity of care and reduction in medication errors. **Method:** A survey based educational research was conducted in randomly selected clinics (n=250) in different areas of Karachi. A structured questionnaire for data collection was designed and answered. The subjects were pharmacist/dispenser/doctors who gave their consent to participate in the study. The data collected was mainly focused on the drug dispensing procedures and elementary measures required for dispensing such as the proper procurement, storage, record keeping, labeling and handling of drugs and/or devices. **Results:** The workflow analysis revealed considerable deviations from the dispensing procedure/guidelines as mentioned in World Health Organization’s Rational Drug Use 1995, good pharmacy practice guideline, American society of hospital pharmacist (ASHP) guidelines. **Conclusion:** The finding from current study shows a trend towards irrational dispensing in clinics. Like many other developing countries, dispensing practices are not satisfactory in private clinics of Karachi. Hence, there is a need for effective intervention program to educate and encourage the proper dispensing practices for promoting rational drug use and thus contributing to the health care system. Appropriate and workable solutions need to be developed and implemented to improve the system.