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ORAL PRESENTATION

(OP CEU-01)

FORMULATION, OPTIMIZATION AND EVALUATION OF NAPROXEN PRONIOSOMAL GEL BY USING BOX – BHENKEN DESIGN

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ABSTRACT

Vesicular drug delivery systems are particularly important for targeted delivery of drugs because of their ability to localize the activity of drug at the site or organ of action thereby lowering its concentration at the other sites in body. Vesicular drug delivery system sustains drug action at a predetermined rate, relatively constant, efficient drug level in the body, and simultaneously minimizes the undesirable side effects. This system has many opportunities for the formulation of transdermal drug delivery system. Proniosomes are one of the novel vesicular drug delivery systems, which are dry formulation and coated with non-ionic surfactants. Proniosome Gels of naproxen sodium, a COX II inhibitor, were prepared by solvent evaporation method and using different concentrations of surfactants (Span 60), cholesterol, polymer (Maltodextrin) and suitable solvents. A preparation with Span 40: 60, cholesterol and Maltodextrin gave maximum encapsulation efficiency (87.48%). Proniosomal formulations showed fairly high retention of naproxen inside the vesicles at refrigerated temperature (4-8 °C) up to 1 month.

Keywords: Naproxen, proniosomes, Niosomes, encapsulation efficiency, drug delivery.

(OP COL-02)

GLAUCOMA: CURRENT AND DEVELOPING CONCEPTS FOR INFLAMMATION, PATHOGENESIS AND TREATMENT

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ABSTRACT

Glaucoma is a prevalent neurodegenerative disorder of the eye. However, the mechanism leading to the disease is still unclear. Increased intraocular pressure (IOP) and subsequent retinal ganglion cell (RGC) death leading to the loss of visual field characterizes the pathology of primary open angle glaucoma, which is the most common form. Possible factors leading to glaucoma include glutamate induced neurotoxicity; nitric oxide (NO) based damage, disruption of neurotrophic factor transport and immune induced neurodestruction. Current treatment options primarily aim at decreasing IOP by utilizing pharmacological agents, laser therapy and surgery. Developing treatments target

neuroprotection with vaccines, the inhibition of NO synthesis and apoptosis. Gaining a better understanding of the pathogenesis can aid in the development of new treatment options and, perhaps, even a cure for glaucoma.

KEYWORDS: glaucoma, glutamate neurotoxicity, autoimmunity, neuroprotection, erythropoietin.

(OP COL-03)

VERNONIA ELAEAGNIFOLIA: AS A NATURAL ANTIULCEROGENIC AGENT

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ABSTRACT

The present study was aimed to evaluate antiulcer and antioxidant activities of methanolic extract of aerial parts of *Vernonia elaeagnifolia* (MEVE). Antiulcerogenic activity of MEVE (200 and 400 mg/kg, b.w., orally) was evaluated with ethanol + aspirin + pylorus ligation induced acute ulcer models in rats. Ulcer index and percentage protection was calculated. MEVE had shown significant antiulcerogenic effect [$p < 0.0001^{**}$, $p < 0.0001$ a, $p < 0.0001$ A] when results were compared with control, disease induced and standard omeprazole respectively. MEVE also showed prominent radical scavenging activity with hydroxyl, nitric oxide and hydrogen peroxide radical scavenging assay. Ethanol is widely used as an ulcerogenic agent, is associated with significant production of O_2 free radicals leading to lipid peroxidation with consequent damage to cell and cell membrane. *Vernonia elaeagnifolia* significantly protects the gastric mucosa against the ethanol challenge. These results suggest that leaves of *Vernonia elaeagnifolia* possess potential antiulcer activity, which may be attributed to its antioxidant mechanism of action.

KEY WORDS: *Vernonia elaeagnifolia*, Omeprazole, ethanol, aspirin, pylorus ligation.

(OP COL-04)

BENEFICIAL ROLE OF ADHATODA VASICA NEES IN STRESS INDUCED MASCULINE SEXUAL BEHAVIOUR

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ABSTRACT

Chronic exposure to stressors increases HPA axis activity and concomitantly reducesHPG axis activity. This antagonistic relationship between both these axes has been proposedto underlie the inhibition of reproductive function due to stress. Sexual behaviour in malesmay be the most vulnerable aspect of male reproduction to acute and chronic stress and thereis no suitable remedy in allopathy to ameliorate the stress and its related complications.Hence adaptogenic and aphrodisiac activity of Pet. Ether extract of *Adhatodavasica*Neeswas investigated in rodent models in the pursuit of finding better remedy for thesecomplications. Stress in rodents was induced by swimming endurance test & post-swimmingmotor swimming test, anoxia stress tolerance test and chronic cold stress. The adaptogenicand aphrodisiac activity of the test extract was assessed using behavioural, biochemical andaphrodisiac parameters. Pre-treatment with the extract at two dose levels (200 and 400mg/kg) significantly restored the stress-induced perturbed parameters in various stressmodels. The presence of flavonoids, alkaloids, tannins and saponins in the extract might beresponsible for the efficacy of the extract.

Keywords: Adhatodavasica, adaptogenic activity, aphrodisiac activity, flavonoids, alkaloids

(OP PP-05)

GENETIC APPROACH TOWARDS PREVENTION OF CANCERS

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ABSTRACT

Cancer is a disease of uncontrolled growth and proliferation whereby cells have escaped the body's normal growth control mechanisms and have gained the ability to divide indefinitely. It is a multi-step process that requires the accumulation of many genetic changes over time. These genetic alterations involve activation of proto-oncogenes to oncogenes, deregulation of tumour suppressor genes and DNA repair genes and 'immortalisation'. The understanding of cancer biology is of key importance to develop novel anti-cancer therapies. The present day advances in sequencing technology have helped to explore the cancer genome more efficiently with much lower cost. Cancers are characterized by DNA and RNA alterations including mutations, gene duplications and changes in messenger RNAs. The integrative approach to utilize genomic and transcriptomic advances can unveil the complete picture of individual genome. The completion of Human Genome Project in 2003 established foundations for precision medicine based on sequencing technologies continues its journey from RNAi, ZFNs and TALENs and now it steps into a unique CRISPR/Cas9 genome editing tool. Genetic engineering has become pivotal in the treatment of cancer and other genetic diseases, especially the formerly-niche use of Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR) Associated with Cas9. The rapid development of the genome editing technologies need an adequate attention towards improving pre-clinical and clinical assays to assess the toxicity, off-target effects, and other possible side effects. CRISPR-Cas systems that enable researchers to model complex, multigenic alterations and conduct high-throughput screens for disease drivers and drug targets will

undoubtedly play a major role in cancer research in the coming years. Although challenges in the application of this platform remain, CRISPR-Cas systems are now established as an important tool to aid in combating this evasive and resilient disease. Improvements of viral and non-viral delivery methods will be necessary to improve the in vivo application of CRISPR/Cas9, laying the ground for the therapeutic use of CRISPR in the future.

Keywords: Cancer, Tumour suppressor genes, CRISPR-Cas System, Genetic Engineering

(OP COG-06)

A REVIEW ON ARTABOTRYS ODORATISSIMUS

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ABSTRACT

Artabotrysodoratissimus is a plant of Annonaceae family and Artabotrys genus. It contains Essential Oils: Benzyl Acetate, Benzyl Benzoate, Linalool, Caryophyllene, Geranyl Acetate, Methyl Benzoate, P-Cresyl Methyl Ether, Safrole, Monoterpenes, Sesquiterpenes etc. Medicinal Properties and Health Benefits of this plant are AntiDepressant, Mood Elevator, AntiSeborrhoeic, AntiSeptic, Aphrodisiac, Hypotensive, Hair Vitalizer, In Post Menstrual Syndrome, In Treating Motion Sickness, Nervine, Sedative, Emollient, Febrifuge. Apart from medicinal uses discussed above, this oil is extensively used in perfumes, deodorants, beauty soaps, shampoos, skin and hair lotions and creams, hair oils etc., in blends or alone. In contrast medicinal plants are widely available and affordable, even in remote areas. The cost of modern medicine is increasing by modern health technology and in many cases is inappropriate to the immediate needs of people in developing countries. Therefore there is a need for intensive research on this valuable medicinal plant species for discovery of its more medicinal properties.

Key words: *Artabotrysodoratissimus*, annonacea family, chemical constituents, research.

(OPCOG-07)

EXTRACTION AND EVALUATION OF AZADIRACHTIN FROM KERNELS OF AZADIRACHTA INDICA AS AN ANTIPROLIFERATIVE AGENT

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Neem (*Azadirachta indica*), a member of the Meliaceae family has been called “the wonder tree” and “nature’s drug store”. All parts of this tree are widely used for treatment of cancer. From Scientific discoveries many anticancer drugs such as cisplatin, Methotrexate, 5-fluorouracil etc have been developed to treat cancer. Due to their narrow therapeutic index, they exhibit certain side effects such as cytotoxicity, hepatotoxicity, nephrotoxicity, thrombocytopenia, leucopenia, peptic ulcers, alopecia etc. Azadirachtin was extracted and evaluated from kernels of *Azadirachta indica* using dichloromethane as solvent by soxhlet apparatus. Azadirachtin was evaluated for antiproliferative using HT-29 and MCF-27 cell lines and cisplatin is used as standard drug. In the present in vitro study azadirachtin was found to possess anticancer activity against HT-29 cell line. The IC₅₀ (µg/ml) on HT-29 cell lines value is found to be 279 and on MC-7 could not be determined. The main objective of this study is to evaluate invitro anticancer activity of *Azadirachta indica* using HT 29 and MCF-7 cell lines. MTT Assay is a colorimetric assay that measures the reduction of yellow 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyl tetrazolium bromide (MTT) by mitochondrial succinate dehydrogenase. The assay depends both on the number of cells present and on the assumptions that dead cells (or) their products do not reduce tetrazolium. The MTT enters the cells and passes into the mitochondria where it is reduced to insoluble, dark purple coloured formazan crystals. The cells are then solubilized with a DMSO and the released, solubilized formazan reagent is measured spectrophotometrically at 570nm. Compounds from medicinal plants and herbs are gaining importance due to antibacterial, anticancer, antifungal, insecticidal, antiviral, anthelmintic and mechanism more. These compounds are safe, economic, effective and easily available.

Keywords: *Azadirachta indica*, Azadirachtin, HT-29, MCF-27, cisplatin, (MTT)

(OPPP-08)

ADVERSE DRUG REACTIONS OF ANTIBIOTICS

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ABSTRACT

Adverse reactions are the recognized hazards of drug therapy and they can occur with any class of drugs and many studies revealed that the incidence is more in the case of antibiotics. The main aim of this study was to detect and analyze Adverse Drug Reactions of antibiotics in a tertiary care hospital. A prospective observational study was carried out in the Department of General Medicine and Dermatology Venereology Leprosy (DVL) in Osmania General Hospital over a period of six months. A total of 100 ADRs were reported from 100 patients during the study period with the female predominance (72%) over males. The average age of the patients in the study was found to be 55-80 years. The majority of the ADRs occurred in the age group of 51-60 years. Number of ADRs was from General Medicine Departments in which the most affected organ systems were the GIT (22%) and the skin (19%). The antibiotic classes mostly accounted were cephalosporins (16%), Aminoglycoside (13%) followed by other. The severity assessment as per Modified Hartwig scale

revealed that most of them were Moderate, Severe, Mild and Least significant ADRs reactions. Of the collected ADRs, 30% were definitely preventable (using the modified Shumock and Thornton method), According to Naranjo Scale the probability assessment was done which showed that the reactions were probably (89%), possible (6%). The results from this study show that ADRs in patients are a significant public health issue impose the significant burden on patients through prolongation of patients hospital stay increasing the admission rates, health care cost. Results show that cephalosporins were extensively used in the Department of General Medicine. The number of drugs prescribed by generic names was low in General Medicine and Dermatology Venereology Leprosy (DVL).Hence effort must be made to encourage prescribing by generic names. Rational usage of antibiotics in the Department of General Medicine and Dermatology Venereology Leprosy (DVL) should be encouraged by following strict Hospital antimicrobial policy.

(OPPP-09)

A COMPARATIVE EVALUATION OF RELATIONSHIP OF ANTIHYPERTENSIVE THERAPY IN PATIENTS WITH MYOCARDIAL INFARCTION WITH ACE I/D GENOTYPES: A PROSPECTIVE GENOMIC STUDY

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ABSTRACT

This study shows the evaluation of relationship of antihypertensive drug response on myocardial infarction with ACE I/D genotype. It also brought in light the possible way of prevention from acute conditions by enlightening the association between disease occurrence, severity, outcome and the genetic predisposition. The objective of analysis of these genotypes was the significantly high concentration of ACE levels, which were found to be higher in DD individuals when compared to ID and II, whereas ID was known to have moderate levels. Prior knowledge of ACE genotypes may be beneficial in the treatment of various cardiovascular diseases, in specific Myocardial Infarction. ACE I/D genotype is a promising candidate locus for investigating pharmacogenomics and it is a step towards personalized medicine. ACE I/D gene polymorphism is examined in a total of 100 hypertensive patients with myocardial infarction (MI) with or without diabetes mellitus and 100 controls (healthy volunteers). Frequencies of ACE genetic polymorphic forms II, ID and DD of MI patients are compared with controls and pattern of distribution is assessed. The antihypertensive medication history is documented in order to establish the association between MI, ACE I/D Genotype and Severity of the disease. (SVD, DVD, TVD and application of killips classification) A significant difference in the genotype distribution has been revealed from the trial when MI patients and controls were compared. The ACE I and D allele frequencies were respectively 0.325 and 0.675 in the overall healthy volunteers' group and 0.53 and 0.47 in the overall study group (MI) with OR = 0.42 (0.28-0.64) and 0.0001 level of significance. We observed that the individuals with II polymorphic form were found to have significant risk for the development of Myocardial Infarction when compared to ID+DD and DD genotype.

Keywords: Antihypertensive drugs, Myocardial Infarction, ACE I/D genotype.

(OPCOL-10)

ALSI FLAX SEEDS - THE FUNCTIONAL FOOD – A REVIEW

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ABSTRACT

Nowadays, Flax seeds are emerging as a “Super food” for its health benefits. The Unani name of flax seed is Tukm-e-katan, commonly known as Alsi. Linseed (*Linum usitatissimum* Linn.) is belongs to family Lineacea, is a annual herb that produces small flat seeds varying from golden yellow to reddish brown in colour. Temperament is Hot 1 and Dry 1 with nutty taste and mucilaginous. The Unani pharmacological actions of Linseeds are Munaffis-e-Balgham (Expectorant), Munzij (Coctive), Jaali (Detergent), Mulayyan (Laxative), Musakin-e-Aujah (Analgesic), Muhallil (Resolvent) and Muhallil-e- Auram (Anti-inflammatory). Flaxseeds have been prized for their health-protective properties. Therapeutically flax seeds are good to cure cough and bronchial asthma, Pneumonia, Pleurisy and Joints pain. Flax seeds are rich in nutrients like Carbohydrates, Protein, Vitamins and some minerals like Calcium, Magnesium, Potassium, etc. The phytochemicals of Linseeds are Linamarin (Glycoside), Lignans (Anti-oxidant) and Omega-3 fatty acids; they are a rich source of alpha linolenic acid (ALA). They are rich in dietary fibre which helps in regular the bowel movements and can improve digestive system and helps in lower the cholesterol level. It is a good source of plant-based protein and can be an alternative protein source for people who do not eat meat. The dosage of Flax seed is 5-7 grams. The important compound unani formulation of linseed is Lauq-e-katan. Details will be discussed in full length paper.

Keywords: Alsi, Linseed, *Linum usitatissimum*, Omega-3 fatty acid, Lignans.

(OPCOG-11)

MIRACLE MEDICINAL HERB ASLISOOS (*GLYCYRRHIZA GLABRA*)

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ABSTRACT

Liquorice (licorice) is the root of *Glycyrrhiza glabra* from which a sweetflavour can be extracted. The liquorice plant is an herbaceous perennial legume native to southern Europe and parts of Asia, such

as India. It is an ancient medicine to cure various types of diseases like ulcer, hepatitis, Addison's disease, osteoporosis, asthma, cough, PCOS, skin diseases, menstrual disorders and acts as immunomodulator, antidepressant, antioxidant etc. The aqueous extract of liquorice causes significant decrease in total cholesterol, serum enzymes, AST, ALT, urea and nitrogen. Chemical constituents of drug are glycyrrhizin, glabranin, glycyrrhizin acid, glabrin, ANB, carbinoxolone, salicylic acid, hydrocortisone, cortisone and estrogen like effect.

Keywords: liquorice, herbaceous, immunomodulator, hydrocortisone

(OPCOL-12)

SEHJANA (MORINGA OLEIFERA) -THE MIRACLE TREE

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ABSTRACT

Plants have been an important source of medicine for thousands of years, even today the WHO estimates that up to 80% of people still rely primarily on traditional remedies such as herbs for their medicines among those herbs one promising species is sehjana (*Moringaoleifera*) is widely regarded as one of the most dense tree on the planet, it is having ability to treat more than 300 diseases. It is fairly large perennial, Angiosperm tree, leaves are usually tripinnate, elliptic opposite, It is a native of sub Himalayan northern part of the India, now it is cultivated throughout the tropical and sub tropical areas of the world for its nutritious leaves specially Asia and Africa. Sehjana (*Moringaoleifera*) leaves are loaded with vitamins, Minerals, Essential Amino acids. Sehjana (*Moringaoleifera*) leaves that have been scientifically reported that the chemical constituent KAEMFEROL, ZEATIN, is a potent Antioxidant, BENZYL ISOTHIOCYANATE and BENZYL GLUCOSINOLATE are having Antibacterial effect against streptococcus faecalis, staphylococcus Aureus, E coli, and Antifungal effect Against Trichophyton Rubrum, Trichophyton mentagrophytes, ISOTHIOCYANATE and THIOCARBAMATE act as a Anti Cancer effect, FLAVONOIDS – QUECERTINE is having ability to neutralize free radicals and relieve inflammation. Finally being that the leaves are most common used part of the plants and their contents in term of bioactive compounds and their pharmacological properties are discussed in detail.

Key words: Perennial, Angiosperm, Tripinnate, Kaemferol, Zeatin, Benzyl Isothiocyanate And Benzyl Glucosinolate, Isothiocyanate, Thiocarbamate, Flavonoids – Quecetine

(OPCOL-13)

ROLE OF UNANI MEDICINE IN THE MANAGEMENT OF HIRSUTISM “KASRAT -E-SHAAR” – A REVIEW

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ABSTRACT

HIRSUTISM is an excessive growth of terminal hairs in women in a male distribution, especially growth of midline hairs over the upper lip, chin, chest, abdomen, back and inner thighs. Hirsutism is a common gynaecological, endocrinological, dermatological, as well as psychogenic disorder in women. It is due to Polycystic ovarian syndrome (PCOS) or Increase in circulating testosterone (Hyperandrogenism) or Decreased level of sex hormone binding-globulin Or Increased sensitivity of hair follicles to the normal circulating androgens or Increased activity of 5 α -reductase which converts testosterone to DHT (Dihydrotestosterone) in the skin and hair follicles. According to Unani concept Kasrat-e-shaar is a complication of prolonged amenorrhea associated with other masculine features like male body contour, excessive hair growth, acne and hoarseness of voice. Prolonged amenorrhea causes the alteration of normal temperament and humors of female body especially of the ovaries and status of equilibrium is disturbed and leading to formation of some unwanted material which is being excreted through skin pores and participate in the formation of thick hairs over the body. The modern treatment of Hirsutism is anti-androgens and oral contraceptives with local application is first line of treatment and broadly useful. In unani system of Medicine, the pharmacological actions of drugs used for hirsutism are Mudirehaiz (Emmenagogue), Musaffiyatekhon (Blood Purificants) and Haaliqat e shaar (Depilatories). There are some very effective single drugs used by the great unani physicians from ancient times such as, Abhal, Charaita, Darchini, Neem, Tukhmeturb and Tukhme Sambhalu for orally and Aslesoos, Aab-e-Natroon, Asl, Aab-e-Leemu and Arq-e-piyaz for local application.

Key words: Kasarat-e-Shaar, Hirsutism, Terminal Hairs, Amenorrhea, Hyperandrogenism, PCOD, Unani Medicine.

(OPCOL-14)

QUANTIFICATION OF HYPOGLYCEMIC PRINCIPLE COMPONENT OF WITHANIA COAGULANS DUNAL BY HPTLC ANALYSIS AND EVALUATION OF THERAPEUTIC HYPOGLYCEMIC POTENTIAL

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ABSTRACT

Objective: The present study aims to analyse phytochemical composition, Therapeutic Hypoglycemic potential and quantification of Hypoglycemic active principle/chemical constituent by the HPTLC procedure of Withaniacoagulans Dunal collected from different geographical areas.

Methods: Fruits of Withaniacoagulans were collected from different geographical locations and analysed for its Phytochemicals, HPTLC analysis of Withaniacoagulans was done, β -sitosterol has been quantified in methanol and ethyl acetate extracts of Withaniacoagulans Dunal from different regions, showing the variation of β -sitosterol content in the drug due to geographical variation. TLC carried with mobile phase Toluene: Ethyl acetate: Glacial Acetic acid (6:1.5:0.5 (v/v)) on Precoated aluminium silica gel plates (Merck) and densitometric determinations was done at 254 nm. Also, Hypoglycemic effect on blood glucose levels (FBG, PPBG) were evaluated by using crude drug and methanolic extract groups in comparison with the standard drug glibenclamide in experimentally induced diabetic rats.

Results: In HPTLC analysis, Calibration curve was prepared and the amount of β -sitosterol estimated in the extracts by comparing the respective peak areas with that of the standard. Therapeutic Hypoglycemic evaluation shows Crude drug and Methanolic extract groups show significant decrease in Preprandial and postprandial blood glucose levels compared to standard group.

Conclusion: A faster, reliable and sensitive HPTLC method has been developed and validated for the analysis of β -sitosterol in seeds of Withaniacoagulans. Moreover, Principle Hypoglycemic Component displayed significant hypoglycemic activity.

Keywords: Withaniacoagulans; HPTLC; Principle component analysis; β -sitosterol; Blood glucose

(OP COL-15)

STANDARDIZATION OF HERBAL DRUGS: AN OVERVIEW

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ABSTRACT

Herbal medicines are used since a long time for the treatment of different kinds of ailments. The use of herbal drugs as medicine is the ancient form of health care known to delicacy and it is used in all cultures throughout history. The primeval persons learned by trial and error basis to identify beneficial plants. The identification of purely active moiety is an important requirement for quality control and dose determination of plant related drugs. Standardization of herbal drugs means confirmation of its identity, quality and purity. The present overview covers the standardization parameters with their standard values of some herbal drugs. The different parameters are

organoleptic, microscopical, physical, chemical and biological. Out of them biological one is the last procedure when others fail to recognize a drug. It is done on living animals, living organs, living tissues and microorganisms.

Keywords: Herbal Drugs, Standardization, Quality Control, microorganism

(OPCOG-16)

MUNDI (SPHERANTHUS INDICUS LINN.) MULTIPOTENTIAL MEDICINAL PLANT- A REVIEW

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ABSTRACT

WHO defines the Traditional Medicine as “sum total of knowledge, skills and practices based on the theories, beliefs and experience indigenous to different cultures, explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness. More than 80% of world’s population is using medicines made from herbal and natural products. Mundi (*Spheranthus indicus*) is one of the traditional herbal medicinal plants. It is abundantly distributed in damp areas, plains and also as a weed in the rice fields. It possesses antimicrobial (Qatil-e-jaraseem), wound healing (Mudammil-e-quruh), immuno-modulator (Muqawwi-e-Ma’na at), antioxidant, anxiolytic (Daaf-e-izterab e nafsani) and nerve stimulant (Muharriq-e-asab) activities. It is useful in various diseases like insanity, tuberculous glands, indigestion, bronchitis, epileptic convulsions, dysentery, urinary discharge, piles etc. This review paper explores the immense medicinal potential of this plant.

Keyword: Multipotential plant, Mundi, *Spheranthus indicus*.

(OPCOL-17)

AZARAQI (STRYCHNOS NUX-VOMICA L.) IN UNANI MEDICINE –A DRUG BLEND OF PHARMACOLOGICAL AND TOXICOLOGICAL ACTIONS

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ABSTRACT

The drugs of herbal origin possess enhanced efficacy and one such name is Azaraq/kuchla (*Strychnos nux-vomica* L.) that are round disc like seeds, endowed with properties like

Musakkin (Analgesic), Muqawwi-i-A'sāb (Nervine tonic), Muharrrik (stimulant) and Muhallil (Resolvent) as described and used by renowned Unani scholars for several decades in various ailments like Fālij (Paralysis), Laqwa (facial palsy or Bell's palsy), Niqris (gout) and Waja' al-Mafāsīl (Arthritis). The active principles are the alkaloids strychnine and brucine which act at the spinal anterior horn cells where they inhibit the post synaptic inhibitor glycine by competitive antagonism. It is reported that strychnine, exerts a more powerful influence on the spinal cord and particularly on the motor tracts, it also stimulates the special senses like sight, hearing and touch. Although Azaraqī is a deadly poison but in Unani system of medicine it is detoxified (Mudabbar) before its use involving certain classical methods. In view of the ascribed effects of this drug, the proposed paper will assess its pharmacological actions, chemical constituents, therapeutic use and its detoxification methods available in classical Unani literature.

Key words: Azaraqī; Strychnine; brucine; Mudabbar.

Pharmaceutics poster

PP-CEU-01

DESIGN CHARACTERIZATION AND OPTIMIZATION OF ORAL THIN FILM OF DIPYRADAMOLE USING 3² FACTORIAL DESIGN

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ABSTRACT

The goal of study was to Design Characterize and Optimize oral thin film (OTF) of Dipyradamol by solvent casting method. Based on preliminary trials, HPMC E5 2V was selected as base polymer, PEG 400 as plasticizer for OTF formulation, respectively. A 3² factorial design was used to study the effect of amount of HPMC E5 2V (X1) and PEG 400 (X2) as independent variables on tensile strength (Y1), Disintegration time (Y2), % in-vitro drug release in phosphate buffer of pH 6.8 at 5 min (Q5min, Y3) as responses. OTF of batch F4 was identified as an optimized batch showing in-vitro, in-vivo disintegration time 20.70 and 21.58 s, respectively; 95.53% Q5min; satisfactory thickness, strength, % elongation, ease of handling, smooth mouthfeel, excellent overall taste; even distribution of all ingredients in OTF; and stable film at specified conditions concluding that PEG 400 and HPMC E5 2V are used in combination to make palatable, stable OTF of Dipyradamol.

Key words: HPMC E5 2V, Oral thin Film, Solvent casting method, 3 Factorial Design

PP-CEU-02

3D PRINTING IN PHARMACY –A NOVEL APPROACH

ShaikSafuraHabeeb

ABSTRACT

Medical applications for 3D printing are expanding rapidly and are expected to revolutionize health care. The application of 3D printing in medicine can provide many benefits, including: the customization and personalization of medical products, drugs, and equipment; cost-effectiveness; increased productivity; the democratization of design and manufacturing; and enhanced collaboration. 3D printing is a layer-by-layer process capable of producing 3D drug products from digital designs. Traditional pharmaceutical processes, such as tablet compression, have been used for decades with established regulatory pathways. These processes are well understood, but antiquated in terms of process capability and manufacturing flexibility. 3D printing, as a platform technology, has competitive advantages for complex products, personalized products, and products made on-demand. These advantages create opportunities for improving the safety, efficacy, and accessibility of medicines. In the current study the 3D techniques and examples along with types and procedures are presented.

Keywords: 3d printing, tablets, medicines, drugs

PP-CEU-03

PHARMACEUTICAL NANOTECHNOLOGY

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ABSTRACT

Research interest and revolution in materials science has been creating considerable interest in the area of drug delivery systems using particulate systems as carrier for small and large molecules. In many cases, it is now possible to manipulate atoms and molecules within materials one at a time and therefore, to construct materials with nanometre-scale precision. This new capability in material science is called nanotechnology. Particulate systems like nanoparticles have been used as a physical approach to alter and improve the motion of the drug within the tissue with respect to time (i.e. pharmacokinetics) and fruitful therapeutic effects of the drug on the body (i.e. pharmacodynamics) of various types of drug molecules. The potential intersection between nanotechnology and the biological sciences is vast. Biological function depends heavily on units that have nanoscale dimensions, such as viruses, ribosomes, molecular motors and components of the extra cellular matrix. In addition, engineered devices at the nanoscale are small enough to interact directly with sub-cellular compartments and to probe intracellular events. They have been used in vivo to protect the drug entity in the systemic circulation, restrict access of the drug to the chosen sites and to deliver the drug at a controlled rate and sustained manner to the desired site of action. Various polymers have been used in the formulation of nanoparticles aiming to increase the therapeutic benefit through drug delivery research, while minimizing side effects. The purpose of this review work is to give the brief idea about various aspects of nanoparticles with their history, formulation, characterization, effect of their characteristics and their applications in delivery of drug molecules.

Key words: Nanoparticles; Polymeric; Biodegradable; Drug Delivery System.

PP-CEU-04

NANO-ROBOTICS AND THEIR MEDICAL APPLICATION

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ABSTRACT

Nano-robots are the robots that are simply known as that controllable machine at the nano (10⁻⁹) meter or molecular scale, composed of nano components. More specifically nano-robotics referred to still largely hypothetical nano technology engineering discipline of designing and building nano robots which do helping the development of pharmaceutical sciences in the research field .Even though the field of nano robotics fundamentally different from that of macro robots and machines used in the designing techniques that eventually could be projected and applied.Due to modern technology, there are many such machines which exists in nature and these can be build more by mimicking nature. Now the present trends that these nano robots play vital role in biomedical generation. Cerebral aneurysm, kidney stones removal, also the removal of defected part of DNA and other such treatment have the greatest aid to save human beings which is just the thing for the betterment of human, public care.

PP-CEU-05

CHLOROQUINE AND NANOPARTICLE DRUG DELIVERY:A PROMISING COMBINATION

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ABSTRACT

Clinically approved cancer therapies include small molecules, antibodies, and nanoparticles. There has been major progress in the treatment of several cancer types over recent decades. However, many challenges remain for optimal use of conventional and nanoparticle-based therapies in oncology including poor drug delivery, rapid clearance, and drug resistance. The antimalarial agent chloroquine has been found to mitigate some of these challenges by modulating cancer cells and the tissue microenvironment. Particularly, chloroquine was recently found to reduce immunological clearance of nanoparticles by resident macrophages in the liver, leading to increased tumor accumulation of

nanodrugs. Additionally, chloroquine has been shown to improve drug delivery and efficacy through normalization of tumor vasculature and suppression of several oncogenic and stress-tolerance pathways, such as autophagy, that protect cancer cells from cytotoxic agents. This review will discuss the use of chloroquine as combination therapy to improve cancer treatment.

Keywords: Chloroquine, vasculature, macrophages, autophagy

PP-CEU-06

LIPOSOMAL DELIVERY SYSTEMS FOR INTESTINAL LYMPHATIC DRUG TRANSPORT

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ABSTRACT

Intestinal lymphatic drug delivery has been widely studied because drugs can bypass the first-pass metabolism in the liver via the lymphatic route, which increases oral bioavailability. Various lipid-based nanoparticles have been used to deliver hydrophobic drugs to the lymphatic pathway. This review focuses on the liposomal delivery systems used for intestinal lymphatic drug transport. Liposomal formulations have attracted particular attention because they can stimulate the production of chylomicrons and the incorporated drugs readily associate with enterocyte-derived chylomicrons, enhancing lymphatic drug transport. We believe that a full understanding of their contribution to intestinal drug translocation will lead to effective oral delivery with liposomal formulations.

KEY WORDS: Chylomicrons, First-pass metabolism, Intestinal lymphatic transport, Lipid, Liposome

PP-CEU-07

NEEDLE FREE DIAGNOSIS FOR MALARIA - A NOVEL APPROACH

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ABSTRACT

Malaria is a mosquito-borne infectious disease of humans and other animals caused by parasitic protozoans of genus plasmodium .Commonly the diseases are transmitted via a bite from an infected female Anopheles mosquito, which introduces the organisms from its saliva into person's circulatory system. A novel transdermal laser technique can detect malaria non-invasively, without the need for chemical reagents or blood samples. The need for sophisticated blood testing for diagnosis has hampered efforts to control malaria. All blood stage malaria parasites produce nanocrystals of a

unique compound, hemozoin as a haemoglobin and a new technique is developed that appears to be able to detect these nanoparticles transdermally. Hemozoin has high optical absorbance and the heat generated when hemozoinnanocrystals are exposed to a picosecond pulse from a near infrared laser evaporates liquid around them, producing transient vapournanobubbles (VNB's). The explosive generation and subsequent collapse of these VNBs generate characteristic optical and acoustic signals, and these signals were used in studies of isolated hemozoinnanocrystals in water. Subsequent experiments confirmed that such VNB's could be generated and detected within plasmodium falciparum-infected human red blood cells but not in uninfected red blood cells. In studies involving malaria infected mice, a transdermal laser probe applied to the ear could detect hemozoin VNBs at a 0.00034% level of parasitemia without any apparent discomfort or morphological damage to ear skin and blood vessels.

Key words: Plasmodium falciparum, novel transdermal laser technique, hemozoinnanocrystals.

PP-CEU-08

Nanomedicines in Coronary Artery Disease (CAD)

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ABSTRACT

Nanomedicines provides a new complementary approach to treat Coronary Arteries Disease (CAD) which is now one of the biggest killers in the western world and mainly affects people of age group above 35 years. CAD is a very composite chronic heart disease which mainly happens due to genetic and environmental factors and the effect of which are mainly interceded through cardiovascular risk factor. It is generally associated when the major blood vessel which supplies blood, oxygen and other nutrients to the heart become damaged. Cholesterol containing plaque in the arteries and inflammation are also the main reason for CAD.

Nanomedicines is one of the most promising therapeutic modalities which help in eliminating CAD. It involves development of drug and devices that work at the nanoscale. Nanoparticles can provide a variety of delivery systems for cargoes such as drugs and genes that can address many problems within the arteries. To improve the performance of the current stents, nanotechnology provides different nanomaterial coatings, in addition to controlled released nanocarriers to prevent in-stent restenosis. Nanomedicines can increase the efficiency of drug, improve local and systemic delivery to atherosclerotic plaque and reduce the inflammation or angiogenic response after intravascular intervention.

However, before practical application becomes widespread many challenges need to be dealt with. These include manufacturing of drugs of nanosize direct nanomaterial cellular toxicity and visualization.

Keywords: Nanomedicines, Coronary Artery Disease, atherosclerotic plaque nanotechnology.

PP-CEU-09

COMPUTER AIDED DRUG DESIGNING FOR TARGETED DRUG DELIVERY SYSTEM

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ABSTRACT

The latest breakthroughs in computer-aided drug design, drug delivery systems, and enabling technologies. Computer Aided Drug Design (CADD) and Delivery Systems offers an in-depth discussion of the computer-assisted techniques used to discover, design, and optimize new, effective, and safe drugs. Recent technological developments in biochemistry, biomedical science, and nanotechnology have made computer-aided drug design and delivery systems possible on a molecular basis. This in-depth treatise covers these pioneering advances. This text reviews all the enabling technologies such as bioinformatics, pharmacokinetics, biosensors, robotics, and bio-instrumentations. The progressive writing style allows you to establish solid fundamental knowledge of cell biology and utilization of the basics to applications such as drug delivery mechanisms and bio-instrumentations. Computer Aided Drug Design (CADD) and Delivery Systems features: Objective and quantitative data on the use of drugs in humans, Bioinformatics information with an emphasis computer-aided genome sequence modelling, Coverage of the latest pharmaceutical applications utilizing biochemical engineering, Practical examples of how recent advances in biochemistry are assisting new drug discovery and molecular-based drug delivery.

PP-CEU-10

FORMULATION AND *IN-VITRO* EVALUATION OF MICROSPHERES LOADED TRANSDERMAL GEL OF FLUCYTOSINE

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ABSTRACT

The current work focuses on the formulation and evaluation of microspheres loaded topical gel containing Flucytosine. Microspheres were prepared by using aqueous ionotropic gelation method. Different polymers, drug to polymer(s) ratio(s) and other parameters were screened to study their effects on properties of microspheres and to optimize each parameter. The microspheres obtained were

subjected to preformulation studies and were characterized for Percentage yield, Drug entrapment efficiency, Particle size analysis and *in-vitro* release studies. Then the optimized formulation was incorporated into the gel prepared with various polymer(s) ratio(s). The developed gel formulations was evaluated for various evaluation parameters. The results of preformulation studies indicates good flow properties. Whereas in *in-vitro* permeation studies, it was found that T4 microspheres batch was found to show highest drug release at the end of 12 hours. Hence, this batch was used for incorporation into all the formulation batches. The results of various evaluation parameters were within the limits. In all the formulations, F8 was considered as the best formulation as its release was superior while compared to the remaining formulations. It releases the drug by first order kinetics and followed Higuchi release kinetics. Thus, it was concluded that flucytosine was successfully developed as gel for enhancing the rate and extent of bioavailability.

Key-words: Flucytosine; microspheres; Gel; Iontropic gelation method.

PP-CEU-11

FORMULATION OF NANO-CURCUMIN AND ITS VALIDATION

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ABSTRACT

The aim of the present study was to extract formulate and evaluate nano-curcumin. Curcumin is natural component extracted from the rhizome of turmeric (*Curcuma longa*), posses anti-inflammatory, anti-cancer, anti-viral, anti-bacterial, anti-oxidant and nematocidal activities. This yellow polyphenolic product is poorly soluble in water and hence formulated to increase its bioavailability. Curcumin was isolated using organic solvent acetone in soxhlet apparatus, distillation, microwave oven and sonication. This curcumin was further dispersed by sonication. The nano-curcumin was estimated for its solubility in water .The nano-curcumin was evaluated by UV-visible spectrophotometry, FTIR studies, SEM analysis, zeta potential and particle size analysis. These studies revealed the nano size of curcumin extracts. Further these nanoparticles were evaluated for its antimicrobial and anticancer activity. Amongst all the methods of extraction the soxhlet methods of extraction showed elevated levels of curcumin extract. The Nanoparticle-based drug delivery approaches have the potential for rendering hydrophobic agents like curcumin dispersible in aqueous media, thus circumventing the pitfalls of poor solubility. Nanocurcumin provides an opportunity to expand the clinical inventory of this successful agent by enabling ready aqueous dispersion.

Keywords: Curcumin,sonication, nanocurcumin, soxhlet extraction, anti-cancer, anti-microbial.

PP-CEU-12

ROBOTICS AND DIGITALISATION IN PHARMACEUTICAL INDUSTRY

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ABSTRACT

The rapid progress in the pharmaceutical industry is due to the advancement in the digitalization and automation starting from the invention to the administration of the drug. Every advancement in the development of the pharmaceutical product is associated with progress in digitalization. A drug or a drug product to be administered safely and to provide efficacy it has to undergo a long journey from its discovery, including pre-clinical and clinical trials to further product development in the research and development. The production and manufacturing systems with appropriate digitalization and automation compile the drug formulation after the servitude of the research and development (R and D) department. Later, the quality control and quality assurance systems utilize digitalization to maintain the quality and standard of the drug product. Subsequently, the packaging and labeling of the drug product are carried out with effective automation. Further, the marketing and supply of the drug products are digitally monitored and dispatched to the distributors and the pharmacies. Finally, the drug product will be dispensed to the patient for its administration with a concordance of digitally monitoring for enhanced efficacy and safety. In the presentation, various strategies for digitalization and automation in the pharmaceuticals from drug discovery to drug administration will be briefly presented.

Keywords: Digitalization, automation, quality control, quality assurance.

PP-CEU-13

“DEVELOPMENT AND CHARACTERIZATION OF TRANSDERMAL FILMS OFFLURBIPROFEN”

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ABSTRACT

Objective: In this study, an attempt was made to develop and evaluate transdermal matrix films of flurbiprofen using ethyl cellulose (EC) and polyvinyl pyrrolidone (PVP) to achieve controlled release in order to minimize the adverse effects of drug associated with its oral administration.

Methods: Transdermal films of flurbiprofen with EC alone and blends of EC:PVP in different ratios of 1:1, 1:2, 1:3, 1:6 and 1:9 were prepared by method of solvent casting on mercury surface. The interaction between drug and the PVP was detected by FTIR and DSC studies. All films were evaluated for physicochemical characteristics such as physical appearance, thickness and weight uniformity, folding endurance, water vapor transmission (WVT) studies, SEM analysis and drug content uniformity. The in vitro permeation studies through rat abdominal skin was performed by using fabricated Keshary-Chien diffusion cell and results were computed by using dissolution software PCP

DISSO V3. The in vitro release data of all films were treated with various kinetic models such as Higuchi, first order, zero order and Korsmeyer-Peppas model. Further in vivo studies like anti-inflammatory, analgesic and skin irritation test were performed for selected EC:PVP transdermal matrix films.

Results: Thin, flexible, smooth and transparent films of flurbiprofen were obtained with EC alone and blends of EC:PVP. The FT-IR and DSC studies confirmed no interaction between the drug and PVP. SEM pictures clearly exhibited the homogeneous dispersion of drug in transdermal films. Thickness, mass, folding endurance and drug content were found to be uniform and reproducible with low SD values. Water vapour transmission through drug free transdermal films followed zero order kinetics. All films prepared with different ratios of EC:PVP showed sustained and prolonged release of flurbiprofen up to 24 h compared to films prepared with EC alone. Further, the in vitro results showed that as the concentration of hydrophilic polymer PVP was increased in the EC films, the amount of drug permeated through the skin was also increased. The highest drug release was observed with EC:PVP at 1:9 ratio (91.07%). The release of flurbiprofen from all transdermal matrix films followed Higuchi kinetic model and mechanism of drug release was found non-Fickian diffusion controlled. The selected film (EC:PVP at 1:9 ratio) showed significant anti-inflammatory ($p < 0.01$) and analgesic activities ($p < 0.01$) as compared with the control. The skin irritancy test on rats showed no sign of erythema and oedema.

Conclusions: From the overall studies it is concluded that the transdermal matrix films of flurbiprofen prepared with blends of hydrophobic polymer (EC) and hydrophilic polymer (PVP) at different ratios holds potential for transdermal delivery which gives a slow and controlled release of drug up to 24 h. Further, the present investigations revealed that the adverse effects of flurbiprofen on oral administration like gastric side effects can be overcome by applying the drug topically in the form of transdermal film.

PP-CEU-14

KUSHTA – AN ANCIENT NANO MEDICINE IN UNANI SYSTEM

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ABSTRACT

Greco-arabic medicines (unani) were proven to cure several diseases worldwide. Kushta is a herb-mineral-metallic compound in Unani prepared by incineration in the size of nanodimensions (usually 2-50nm) are nearer to nano crystalline material similar in physico-chemical properties. Kushtas are nano sized formulations have various health benefits like immune modulation, anti-aging, increasing bone density with no harmful effects. Now a day's technology producing nanosized particles ranging 1-100 nm dimensions which has increased diffusivity, bio availability, solubility in treatment of

various complicated diseases like cancer. The kushta powder was characterized by X-ray diffractometer (XRD), Vibrating sample magnetometer (VSM) Scanning Electron microscopy (SEM). X-ray diffraction analysis revealed that the crystalline size of kushta powder is less than 100nm.

Key words; Unani medicine, Kushta, Nano particle

PP-CEU-15

DESIGN AND EVALUATION OF LURASIDONE HYDROCHLORIDE FAST DISSOLVING TABLETS

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ABSTRACT

Low aqueous solubility is a major problem faced during formulation development of new drug molecules. Lurasidone HCL (LRD) is an antipsychotic agent specially used in the treatments of schizophrenia and is a good example of the problems associated with low aqueous solubility. Lurasidone is practically insoluble in water, has poor bioavailability and slow onset of action and therefore cannot be given in emergency clinical situation like schizophrenia. Hence aim of this research was to develop fast dissolving tablets of lurasidone HCL. Fast dissolving tablets of lurasidone were prepared by direct compression method using different super disintegrants such as sodium starch glycolate, croscarmellose, and indion 414. The prepared tablets were reevaluated for post-compression parameters, in vitro drug release studies and drug excipient compatibility studies (ATR). Among all the formulations, the formulations prepared by using indion 414 as the overall best formulation based on in vitro drug release studies, 99.68% of drug release was observed. It was concluded that fast dissolving tablets of Lurasidone HCL were formulated successfully with desired characteristics which disintegrated rapidly, provided rapid onset of action and enhanced the patient convenience and compliance.

Pharmacology poster

PP-C0L-01

EVALUATION OF ANTI-ULCER ACTIVITY OF THE AQUEOUS LEAF EXTRACT OF *HIBISCUS PLATANIFOLIUS* IN RATS

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ABSTRACT

The present study was carried out to evaluate the anti-ulcer activity of aqueous leaf extract of *Hibiscus platanifolius* (HP) in rats. The effect of HP aqueous extract on gastric ulcer in rats in pylorus ligation-induced and ethanol-induced models was studied using single dosing (200, 400 mg/kg) and repeated dosing (200 mg/kg for 14 days) approaches. Ranitidine (50 mg/kg) and sucralfate (100 mg/kg) were used as the standard drugs. Depending on the model, outcome measures were volume and pH of gastric fluid, total acidity, ulcer score, percent inhibition of ulcer score, ulcer index as well as percent inhibition of ulcer index. Data were analyzed using one-way analysis of variance followed by Tukey's post hoc test, and $P < 0.05$ was considered as statistically significant. HP significantly ($P < 0.001$) reduced gastric ulcer index by 58.63% and 64.16%, respectively, in pylorus ligation-induced and ethanol-induced ulcer models at the 400 mg/kg dose, which is comparable to the standard drugs. 14 days pre-treatment with HP 200 mg/kg dose exhibited significant ($P < 0.001$) ulcer inhibition by 68.36% and 69.12% (pylorus ligation-induced model) as well as 69.98% and 87.45% (ethanol-induced model), respectively. HP possesses both dose-dependent and time-dependent anti-ulcer effect in the two models. HP aqueous Extract contains secondary metabolites such as flavonoids, tannins, and saponins were present. The findings of this study confirmed that HP has anti-ulcer pharmacologic activity due to one or more of the secondary metabolites present in it.. Further investigations on isolation of specific phytochemicals and elucidating mechanisms of action are needed.

Key words: *Hibiscus platanifolius*, pylorus ligation, Ranitidine, sucralfate

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PP-COL-02

ONCOLYTIC VIROTHERAPY

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ABSTRACT

Oncolytic virotherapy is an emerging treatment modality which uses replication competent viruses to destroy cancers. Advances in the past two years include preclinical proof of feasibility for a single-shot virotherapy cure, identification of drugs that accelerate intratumoral virus propagation, new strategies to maximize the immunotherapeutic potential of oncolytic virotherapy, and clinical confirmation of a critical viremic threshold for vascular delivery and intratumoral virus replication. The primary clinical milestone was completion of accrual in a phase III trial of intratumoral herpes simplex virus therapy using talimogenelaherparepvec for metastatic melanoma. Challenges for the field are to select 'winners' from a burgeoning number of oncolytic platforms and engineered derivatives, to transiently suppress but then unleash the power of the immune system to maximize both virus spread and anticancer immunity, to develop more meaningful preclinical virotherapy models and to manufacture viruses with orders of magnitude higher yields compared to established vaccine manufacturing processes.

Keywords: Immune system, oncolytic virotherapy, tumor, vaccines etc.

PP-COL-03

EFFECT OF CO-TREATMENT WITH PIOGLITAZONE AND AZATHIOPRINE ON EXPERIMENTALLY INDUCED RHEUMATOID ARTHRITIS IN RODENT MODELS

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ABSTRACT

Rheumatoid arthritis (RA) is a chronic inflammatory disease primarily affecting the synovial joints of the body. Azathioprine is considered as a mainstay in the management of RA. However, monotherapy with Azathioprine in RA is often limited by potential long-term toxicity. The present study was designed to investigate the antiarthritic activity of Azathioprine-Pioglitazone combination therapy to check whether it has an add on benefit over monotherapy with azathioprine or pioglitazone on disease activity in rodent models. Arthritis was induced by subcutaneous injection of formaldehyde (acute) and completes Freund's adjuvant (chronic) in the right hind paw of Wistar albino rats. The disease modifying action of the drugs was assessed by various physiological and biochemical parameters along with histopathological and radiological analysis of affected joints. The test drugs showed significant inhibition of the paw volume in both the Formaldehyde and Complete Freund's Adjuvant (CFA) induced arthritis along with reverting the altered biochemical parameters. These findings were corroborated by radiological and histopathological studies. Combination of azathioprine and pioglitazone exhibited better antiarthritic effect than the individual drugs showing synergistic interaction between them.

Keywords: Azathioprine, Pioglitazone, Complete Freund's adjuvant, Formaldehyde, Rheumatoid arthritis.

PP-COL-04

PHYTOCHEMICAL EVALUATION, GC-MS ANALYSIS, OF BIO-ACTIVE COMPOUNDS OF METHANOLIC EXTRACT OF LEAVES OF *Tecomastans* IN RODENT MODELS

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ABSTRACT

Herbal treatment is a natural form of healing or alternative therapy to cure ailments or diseases for treatment of cognitive disorders. The present was undertaken to investigate Anti-amnesic activity of methanolic extract of leaves of *Tecomastans*(METS)in rodent models. METS were screened for phytochemical constituents. The results revealed the presence of alkaloids, flavonoids, phenols,

sterols, terpenoids and tannins, glycosides, saponins, aminoacids and carbohydrates. Further these constituents were confirmed by using gas chromatography linked with mass spectrometer (GC-MS). Acute toxicity studies were carried out as per OECD guidelines 425 and the extract was found to be safe upto 2000 mg/kg bd.wt.

In-vivo anti-amnesic activity was performed in diazepam and aluminium induced amnesic models using actophotometer, rotarod, cook's pole climbing apparatus. The biochemical estimations like AChE, TBARS, GSH, and SOD were evaluated. Histopathological studies of mice brain were carried out in aluminium chloride induced amnesic model.

METS showed significant improvement in cognitive impairment in diazepam and aluminium chloride induced amnesic models and also significantly ($P < 0.05$) reduced brain AChE and oxidative stress parameters like TBARS, GSH and SOD levels. Histopathology studies of mice brain have shown improvement in the number of layers and organisation of pyramidal cells in hippocampus of groups treated with the extract and the standard drug donepezil.

From the results it is clear that METS possess anti-amnesic activity.

Keywords: *Tecomastans*, Anti-amnesia, GC-MS, Memory.

PP-COL-05

EVALUATION OF DIABETIC NEPHROPATHY OF METHANOLIC EXTRACT OF THE AERIAL PARTS OF *BOUGAINVILLEA SPECTABILIS* IN RODENT MODELS

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ABSTRACT

To evaluate the diabetic nephropathy activity of the methanolic extract of the aerial parts of *Bougainvillea spectabilis* against streptozotocin induced diabetic using male albino rats. The aerial parts of *Bougainvillea spectabilis* consists of various active constituents like alkaloids, flavanoids, terpenoids, tannins, saponins and phenols. Diabetes was induced by a single injection of Streptozotocin (45 mg/kg, i.p.) in rats. STZ-diabetic rats were treated with oral doses of MEBS (200 and 400 mg/kg) for 8 weeks. The blood glucose levels, serum and urine parameters, antioxidant parameters of kidney were investigated. The extract increased the body weight, decreased blood glucose levels, creatinine, blood urea nitrogen, total cholesterol, triglycerides, albumin in serum and urine, respectively. MEBS significantly increased the antioxidant enzymes like glutathione, catalase, superoxide dismutase and decreased lipid peroxide levels. Histological evaluation revealed reduced vacuolar degeneration of tubules; periodic acid Schiff base (PAS), positivity staining intensity in glomeruli and basement membrane thickening confirming that MEBS treated the microvascular complications of STZ-diabetic rats.

Keywords: MEBS, diabetic nephropathy, streptozotocin

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COMPARATIVE EVALUATION OF COGNITIVE ENHANCEMENT ACTIVITY OF CALCIUM CHANNEL BLOCKERS

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ABSTRACT

Degenerative dementia is mainly caused by Alzheimer's disease and/or cerebrovascular abnormalities. Disturbance of the intracellular calcium homeostasis is central to the pathophysiology of neurodegeneration. In Alzheimer's disease, enhanced calcium load may be brought about by extracellular accumulation of amyloid β . Calcium channel blockade might attenuate its consequent neurodegeneration. The main objective of our research was to investigate the cognitive enhancement activity of CCBs like verapamil, diltiazem and amlodipine in selected preclinical models. Dementia in animals was induced by administration of diazepam (acute) and aluminium chloride (chronic). The cognitive enhancement activity of the test drugs was assessed by physical and biochemical parameters. Verapamil, diltiazem and amlodipine prominently alleviated the memory loss produced by diazepam and aluminium chloride and also reverted back the altered biochemical parameters. However, they didn't alter AChE levels signifying acetylcholine independent action. Amlodipine exhibited better cognitive enhancement activity than verapamil and diltiazem which might be due to its prominent BBB partitioning ability. The study marked novel therapeutic strategy for the management of neurodegenerative condition like Alzheimer's.

Key words: Verapamil, Diltiazem, Amlodipine, Diazepam, Aluminium chloride, Alzheimer's disease.

PP-COL-07

GERM CELL TUMOR

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A **germ-cell tumor (GCT)** is a neoplasm derived from germ cells. Germ-cell tumors can be cancerous or benign. Germ cells normally occur inside the gonads (ovary and testis). GCTs that originate outside the gonads may be birth defects resulting from errors during development of the embryo. Some investigators suggest that this distribution arises as a consequence of abnormal migration of germ cells during embryogenesis. Others hypothesize a widespread distribution of germ cells to multiple sites during normal embryogenesis, with these cells conveying genetic information or providing regulatory functions at somatic sites. Extragonadal GCTs were thought initially to be isolated [metastases](#) from an undetected primary tumor in a [gonad](#), but many germ cell tumors are now

known to be [congenital](#) and originate outside the gonads. The most notable of these is [sacrocoecygealteratoma](#), the single most common tumor diagnosed in babies at birth. Of all anterior mediastinal tumors, 15–20% are GCTs of which about 50% are benign teratomas. Ovarian teratomas may be associated with [anti-NMDA receptor encephalitis](#).

PP-COL-08

ANTIPARKINSON MEDICATION

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ABSTRACT

The goal of the most common Antiparkinson drugs is to either replace the dopamine levels in the brain or mimic the actions of dopamine. The main categories of Antiparkinson drugs are anticholinergic drugs and dopaminergic drugs. Drugs such as L-DOPA, Deprenyl, Tyrosine hydroxylase, Apomorphine and Anticholinergic drugs are used as common medication for Parkinsonism. L-DOPA is the precursor of dopamine. Once a preliminary diagnosis is made carbidopa-levodopa can be given as common medication. It is referred to as standard treatment for Parkinsonism. L-DOPA causes the person's remaining dopaminergic neurons to produce and secrete more dopamine, counteracting the effects of Parkinson's disease. Deprenyl can be given in the combination with L-DOPA or separately. It inhibits the activity of enzyme MAO-B, which slows the progression of Parkinson's disease. Tyrosine hydroxylase catalyzes the formation of L-DOPA, the rate-limiting step in the biosynthesis of dopamine. In other words, it is a precursor to neurotransmitters and increases plasma neurotransmitter levels of dopamine and norepinephrine. This medication should not be used when taking L-DOPA, as L-DOPA interferes with the absorption of tyrosine. Apomorphine is referred to as dopamine receptor agonist. However, it causes severe side effects when used on its own. Anticholinergic drugs such as benzhexol and orphenadrine reduce the effect of acetyl choline in brain by antagonizing cholinergic receptors.

Keywords: L-DOPA, Deprenyl, Tyrosine hydroxylase, Apomorphine, Benzhexol, Orphenadrine

PP-COL-09

TRIGEMINAL NEURALGIA

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ABSTRACT

Trigeminal neuralgia (TN or TGN) is a chronic pain disorder that affects the trigeminal nerve. There are two main types: typical and atypical trigeminal neuralgia. The typical form results in episodes of

severe, sudden, shock-like pain in one side of the face that lasts for seconds to a few minutes. Groups of these episodes can occur over a few hours. The atypical form results in a constant burning pain that is less severe. Episodes may be triggered by any touch to the face. Both forms may occur in the same person. It is one of the most painful disorders. This disorder is characterized by episodes of severe facial pain along the trigeminal nerve divisions. The trigeminal nerve is a paired cranial nerve that has three major branches: the ophthalmic nerve (V₁), the maxillary nerve (V₂), and the mandibular nerve (V₃). One, two, or all three branches of the nerve may be affected. Trigeminal neuralgia most commonly involves the middle branch (the maxillary nerve or V₂) and lower branch (mandibular nerve or V₃) of the trigeminal nerve. It is a painful condition, and can result in depression.

KEYWORDS: Pain disorder, typical, atypical, severe facial pain, trigeminal nerve division

PP-COL-10

REGENERATIVE POTENTIALS OF NEUROSTEROIDS IN MODULATION OF NEURONAL DISORDERS

ZuhaSha

ABSTRACT

Impact of neurosteroids on brain and their therapeutic potentials is summarized. Neurosteroids are endogenous or exogenous steroids that are synthesized within the brain or reach the brain through blood stream. They are responsible for rapidly altering neuronal excitability through interaction with ligand-gated ion channels and other cell surface receptors. They are classified as pregnaneneurosteroids (allopregnanolone and allotetrahydrodeoxycorticosterone), androstaneneurosteroids (androstenediol and etiocholanolone) and sulfated neurosteroids (pregnenolonesulphate). Pregnaneneurosteroids are positive allosteric modulators of GABA-A receptors with powerful antiseizure activity. They are endogenous regulators of seizure, anxiety, and stress. Sulfated neurosteroids are negative GABA-A receptor modulators acting as memory-enhancing agents. Neurosteroidogenic agents that lack benzodiazepine-like side effects show promising outcomes in the treatment of anxiety and depression. Steroids in the nervous system require coordinated expression and regulation of genes encoding the steroidogenic enzymes in several different cell types (neurons and glia). It produces a spectrum of effects in CNS disorders via positive allosteric modulation of the GABA-A receptor and exhibit quantitative and qualitative differences.

Keywords: Neurosteroids, GABA-A modulators, epilepsy, alzheimer's disease, depression, insomnia, anxiety

PP-COL-11

EFFECT OF CO-ADMINISTRATION OF GREEN TEA (*Camellia sinensis*) ON CLOVE (*Syzygium aromaticum*) INDUCED HEPATOTOXICITY AND OXIDATIVE STRESS IN WISTAR RATS

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ABSTRACT

The study was designed to investigate the potential of oil extracts of clove (*Syzygium aromaticum*) to induce oxidative stress and hepatotoxicity in wistar rats. The ameliorative effect due to co-administration with green tea, was also determined. Adult wistar rats were exposed via oral gavage to one of the following: Mineral oil, 5% green tea (GT), 12.5 mg/kg/day chlorpyrifos (CHL) 360/mg/day clove oil (CO), green tea + chlorpyrifos and green tea + clove oil. Experimental treatment lasted 3 weeks, after which animals were sacrificed and the following indices of oxidative stress and hepatotoxicity were determined in the plasma levels of reduced glutathione (GSH), activities of catalase, glutathione peroxidase (GPx), aspartate aminotransferase (AST), alanine amino transferase (ALT) and alkaline phosphatase (ALP). There was a significant decrease in plasma level of GSH in the chlorpyrifos and *S. aromaticum* treated groups compared to the controlled rats. The activities of AST and ALT were higher in the chlorpyrifos and *S. aromaticum* treated groups compared to the controlled, however these data were only significant in the CHL treated group. The activities of GPx, catalase and ALP did not differ significantly among the groups. The co-administration with *C. sinensis* resulted in less depletion of GSH as well as reduced level of plasma AST and ALT. Overall the results of the study show that the co-administration with *C. sinensis* has the potential to ameliorate the clove induced oxidative stress and hepatotoxicity in rats.

Keywords: Hepatotoxicity, clove (*Syzygium aromaticum*), green tea (*Camellia sinensis*), oxidative stress, Wistar rats

PP-COL-12

ANTI-NMDA RECEPTOR ENCEPHALITIS – A REVIEW

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ABSTRACT

Anti-NMDA receptor encephalitis is an autoimmune disorder which is characterized by severe neurological and psychiatric symptoms and is difficult to diagnose. In this condition antibodies attack

NMDA (N-methyl-D-aspartate)-type glutamate receptors at central neuronal synapses which leads to memory and learning impairments, with psychosis, and ultimately with excitotoxic brain injury. Distinct phases of illness have become increasingly appreciated, and include a range of psychotic symptoms early in the course of the disease followed by more severe fluctuations in consciousness with neurologic involvement, and ultimately protracted cognitive and behavioral deficits. It is increasingly recognized as an important differential diagnosis in patients with encephalitis of unknown etiology. Early symptoms include fever, headache, and feeling tired which is then followed by psychosis which presents with delusions and hallucinations. Females are approximately four times more likely to be affected than males. A diagnosis requires antibodies to be detected in the body fluids of someone with symptoms consistent with anti-NMDA receptor encephalitis. The largest case series to date characterized 577 patients with anti-NMDA receptor encephalitis. NMDA receptor serum antibodies was found in approximately 6% of patients with first-onset schizophrenia. Patients respond well to immunotherapy, but psychiatric symptoms can be challenging to manage. Here is an up to date review of this disorder and the importance of differential diagnosis of anti NMDA receptor encephalitis.

Keywords: NMDA receptors, autoimmune, psychosis, Encephalitis, schizophrenia

PP-COL-13

QUALITY CONTROL OF UNANI DRUGS: NEED OF THE HOUR

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ABSTRACT

The Unani system of medicine is one of the oldest healthcare systems of the world, originated in Greece (Yunan) and Unani medicine had been used in the treatment of a range of ailments by all cultures of human civilization throughout history. In Unani system of medicine the drug derived mainly (~85%) from natural sources or plant and ~10% from animal sources and ~5% from mineral sources. Chemically, most of the Unani drugs contain various active constituents like alkaloids, glycosides, steroids, saponins etc. and other compounds which are used in various diseases. In present scenario, Unani medicine continues to be widely used in various countries mostly in India, and its uptake is increasing rapidly day by day, but the proper standardization methods must be necessary for preparation of formulations otherwise secondary metabolites or active constituents might not up to the quality. Presently the Unani drugs are not properly standardized in terms of modern analytical tools of quality control, therefore the different doses forms of Unani drugs are in need of quality control in raw material, processing methods and on finished product. Furthermore to ensure the safety, quality and efficacy of the drugs, the quality control on standard technique is necessary and is need of the hour.

PP-COL-14

NEPHROPROTECTIVE ACTIVITY OF AMORPHOPHALLUS PAEONIIFOLIUS ON GENTAMICIN INDUCED NEPHROTOXICITY IN RATS.

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ABSTRACT

Objective: To investigate the Nephroprotective activity of Methanol and Aqueous extracts of *Amorphophalluspaeoniifolius* on Gentamicin induced nephrotoxicity in male rats. **Material and**

Methods: Adult wistar male rats (150-200gms) were evenly divided into 4 groups of 6 animals each. Group-1 and 2 served as control and Gentamicin induced models respectively, while Group-3 and 4 are the treatment groups which were simultaneously treated with Methanolic (ME) (250mg/kg) and Aqueous (AE) (250mg/kg) extracts of *Amorphophalluspaeoniifolius* respectively, after each dose of Gentamicin (80 mg/kg, i.p.) for 10 days. On 11th day, blood samples for biochemical parameters, while the rat kidneys for histology were obtained under inhaled diethyl ether anaesthesia.

Results: Gentamicin caused nephrotoxicity as evidenced by marked elevation in serum urea and creatinine. Co-administration of ME and AE extracts with Gentamicin decreased rise in serum urea and creatinine. *Amorphophalluspaeoniifolius* extracts significantly ($P < 0.001$), show increased activities of renal Catalase and Glutathione and significant ($P < 0.001$) decreased activity of lipid peroxidase. Apart from these, histopathological changes also showed the protective nature of *Amorphophalluspaeoniifolius* extracts against Gentamicin induced necrotic damage of renal tissues.

Conclusion: It was observed that the Methanolic extract of *Amorphophalluspaeoniifolius* conferred more nephro-protective and by histopathological and biochemical observations against Gentamicin induced nephrotoxicity in rats, while compared to aqueous extracts. In the future, *Amorphophalluspaeoniifolius* could constitute a lead to discovery of a novel drug for treatment of drug induced nephrotoxicity.

Key words: *Amorphophalluspaeoniifolius*, nephro-protective, Gentamicin, methanol

PP-COL-15

ROLE OF UNANI MEDICINE “ASROL” *RAUWOLFIA SERPENTINA* LINN. IN THE MANAGEMENT OF HYPERTENSION

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ABSTRACT

In Indian traditional system of medicine Rauwolfiaserpentina Linn is commonly used to treat the various ailments. Rauwolfiaserpentina Linn belongs to the family Apocynaceae. It is also known as “snakewood” and widely used for the treatment of certain neuropsychiatric disorders, insomnia, insanity and as a sedative in snakebite. It is commonly used since centuries in Unani system of medicine to treat Zaght-al-Dam Qawi (hypertension), amraz-e-asaab (nervous diseases), Maalikholia (Melancholia) Ikhtinaaq-e-Rehm (Hysteria) Ladghat-ul-Haiya (snakebite). And also used as Musakkin (Sedative), Muqawwi-e-Rehm (Uterine tonic) and Musqit-e- Janeen (Abortifacient) etc. It contains some alkaloids i.e. Ajmaline and serpentine etc. This review is aimed to explore pharmacological actions and therapeutic uses of ASROL (Rauwolfiaserpentina Linn) present in Unani literature supported with the clinical and animal studies.

Key words: Asrol, Rauwolfia serpentine, Hypertension, Unani Medicine

PP-COL-16

INCREDIBLE MEDICINAL BENEFITS OF SPICES IN UNANI MEDICINE

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ABSTRACT

The history of spices is the history of humankind itself, with empires rising and falling based on the trade of exotic spices from distant lands, their intoxicating allure changing and shaping the very foundations of our society. Herbs and Spices are very common ingredients of most of the compound drugs of Unani (Greco-Arab) System of Medicine due to their diverse pharmacological potentials and very few side effects on human health. Though these spices provide innumerable benefits they are used sparingly. In the current set-up, the anti-proliferative, anti-hypercholesterolemic, anti-diabetic, anti-inflammatory effects of spices have overriding importance, as the key health concern of mankind nowadays is diabetes, cardio-vascular diseases, arthritis and cancer. Spices or their active compounds could be used as possible ameliorative or preventive agents for these health disorders. Spices are rich in antioxidants, and scientific studies suggest that they are also potent inhibitors of tissue damage and inflammation caused by high levels of blood sugar and circulating lipids. Some of the spices used as Herbal drugs are Syzygium aromaticum (Laung), Coriandrum sativum (Dhaniya), Trigonella foenum-graecum (Methi), Myristica fragrans (Jaiphal), Crocus sativus (Zaffran / Kesar), Cinnamomum zeylanicum (Dalchini).

Keywords: spices, antioxidants, anti-diabetic, unani medicine.

PP-COL-17

USE OF USTUKHUDDUS TO TREAT OVARIAN DISORDERS

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ABSTRACT

Since time immemorial, herbal medicines have special place in the therapeutic armamentarium. Even in today's pharmaceutical era, herbal medicines play an important role. *Lavandula stoechas* Linn of Lamiaceae / Labiatae family is one of the ancient period aromatic medicinal herb which is widely used therapeutically and in aromatherapy to stabilize and soothe the mind and body. In Unani literature it is known as *Ustukhuddus* and *Jarob-e-Dimagh* (broom of brain). It is used in many general and urogenital diseases as a single drug or in polyherbal formulations, due to its pharmacological actions such as anti-septic (*Daf-e-Taffun*), deobstruent (*MufattehSudad*), demulcent (*Mulattif*), resolvent (*Muhallil*), Brain tonic (*Muqaww-I-Dimagh*), purifier of phlegm and black bile (*Munaqq-i-Balghm –wa- Sauda*), nervine tonic (*Muqaww-i- Asab*), exhilarant of heart and brain (*Mufarrah-e-Qalb-wa-Dimagh*), stimulant (*Muharrik*), antispasmodic (*Daf-e-Tashanuj*), emmenagogue (*Mudir-e-Haiz*) properties. Some of these properties get scientific status in many research studies and proved its antioxidant, anti-inflammatory, antispasmodic, anxiolytic, neuroprotective, hepato and renal protective effects. These effects ascribed due to phytoconstituents such as Carbohydrates, Glycosides, Phenols, Steroids, Terpenes, Resins, Aluminium, Calcium, potassium, Iron, Magnesium and essential oil. Today in women common gynecological disorders are ovarian cyst and polycystic ovarian disease mainly they are due to hormonal imbalance or morbid humors. Due to said constituent and aromatic properties it has been using to treat ovarian disorders, it is not only beneficial for therapeutically also it normalizes the humor and hormones by soothing the nerves and brain to help the correct bodily functions and also nutritive effects improving the overall health of individual.

Keywords: *Ustukhuddus*, *Lavandula*, Unani literature, Ovarian disorders

PP-COL-18

DALAK (MASSAGE) AND USE OF UNANI ADVIA (DRUG)

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ABSTRACT

Unani system of medicine provides comprehension about the state of human body while in health and during turn down of health. Unani system strives to find the best methods to leads a healthy life with minimal or zero risk of any sickness additionally, the treatment is not only done through Unani formulations but also by the regimenal therapies (Tadabeer) like Hijamah (cupping), Taleeq (leeching), Fasd (venesection), Dalak (massage), Riyazat (exercise) etc. Dalak is widely practiced regimen that is used for restorative, preventive as well as for therapeutic purposes. Almost all the civilizations having evidences in their manuscripts about the use of dalak to improve impure blood or impurities from the body. Dalak found to be effective in treatment of neurological and musculoskeletal disorders. Ibne Rushd stated that Dalak is a type of exercise used for the removal of toxins or waste metabolites from the body. Unani system has a treasure of many drugs like rohaniyat (oils) and mufridadvia (single drugs). According to the disease, dalak should be done in different parts of body and with different type of rohaniyat (oils) and mufridadvia (single drugs).

Keywords: Dalak, neurological and musculoskeletal disorders, rohaniyat.

PP-COL-19

NEED OF STANDARDIZATION OF HERBAL MEDICINES IN PRESENT ERA

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ABSTRACT

The lack of quality standards has resulted in mild to serious adverse effects ranging from hepatotoxicity to death. Hence, herbal ingredients require tools for determining identity, purity and quality and tools must be technically enough, rapid and cost effective with GMP requirements. World health organization has set specific guidelines for the assessment of safety, efficacy and quality of herbal medicines. Herbal products should also have an important role for the reproducibility of the effect of the active ingredients from batch to batch uniformity. Standardization includes proper authentication and taxonomic assignment, through DNA fingerprinting and DNA coding, structural elucidation of all isolated compounds of medicinal plants, identification of the bioactive components for the pharmacological activity, international harmonization of specific standardization process, etc. There are various new hyphenated technologies present such as chromatographic and spectroscopic analysis to analyse the herbal product for its purity and efficacy for the chemometric approaches. Several markers such as taxonomic, chemical, genomic, proteomic markers aid in the identification of herbal drug components. It is recommended that various government agencies should follow a more

universal approach to herbal quality by adopting the WHO guidelines and develop monographs using the various quality parameters.

PP-COL-20

PHARMACOLOGICAL PROPERTIES OF OOD-E-SALEEB (PAEONIA EMODI): A REVIEW

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ABSTRACT

Dried and powdered roots of *Paeonia officinalis* are used as a medicine in both Indian and Chinese system of medicines. The roots are cleansed carefully in cold water with a brush and allowed to remain in the water for a short period of time. The root has been used medicinally for over 2,000 years mainly in the treatment for epilepsy. Root is also antispasmodic, diuretic, sedative and tonic and has been successfully employed in the treatment of convulsions and spasmodic nervous affections such as epilepsy. It has also been used in the treatment of whooping cough whilst suppositories are sometimes made of the root to relieve anal and intestinal spasms, hemorrhoids and varicose veins. Experimentally it has been proved to have antihypertensive, abortifacient action and anti-ulcer activity. The roots of this plant are of great medicinal significance in unani system and homeopathy. The roots contain asparagin, benzoic acid, flavonoids, paeoniflorin, paeonin, paeonol, protoanemonin, tannic acid, triterpenoids, and volatile oil. This review covers traditional uses and the phytoconstituents of the roots of *Paeonia officinalis*.

PP-COL-21

DATURA: DEADLY POISON AND A POTENT DRUG

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ABSTRACT

From the beginning of life, humans used plants for different purposes like food, medicine and also as an intoxicant. The use of intoxicants is as old as civilization itself. Jauz-ī -masal (*Datura stramonium* L. and *Datura alba* Nees), a wildy growing plant belonging to family of Solanaceae,

commonly known as Devil snare and Thorn apple is attributed with both poisonous and medicinal value. It contains biologically active substances like Alkaloids-Atropine, scopolamine, tannins, carbohydrate, and proteins. Jauz-ī-masal (Datura) also primarily used as intoxicant and hallucinogenic. Traditionally, it has been used for curing various ailments including skin diseases, wounds, inflammation, fever, cough, rheumatism, sciatica etc. In unani medicine, it has been mentioned in classical literature that this herb is used in several skin disorders especially Bars(vitiligo), Juzam(leprosy), jarab(itching), hair falling, asthma, and for glowing skin etc. Different studies suggests its safety, toxicity aspects as well as its pharmacological activities like analgesic, anti-inflammatory, antiviral, antidiarrheal. The toxic properties of Datura seeds were well known to the ancient periods and their use for suicidal and homicidal purposes. In the full paper an attempt will be done to explore the poisonous as well as medicinal properties of Datura.

Keywords: Datura, Jauz-ī-masal, Atropine, Scopolamine

PP-COL-22

ANTI-INFLAMMATORY ACTIVITY OF ŞİBR (ALOE BARBADENSIS MILL.):

AREVIEW

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ABSTRACT

Elva (Aloe), also known as Şibr in Unani Medicine is one of the oldest medicinal plants documented in the history. Its scientific name is Aloe barbadensis Mill, and it belongs to the family Liliaceae. The part of the plant used for medicinal properties is fresh and dried juice of leaves pulp, and its Mizāj (temperament) is hot and dry. In Unani System of Medicine, it has been used in various ailments since antiquity. Therapeutic actions of Şibr mentioned in Unani classical text are Mushil (purgative), Mulayyin (laxative), Muhallil-i-Waram (anti-inflammatory), Mudir-i-Bawl (Diuretic) and Mudir-i-Hayḍ (Emmenagogue). Pharmacological actions of Şibr based on the scientific studies include anti-inflammatory, analgesic, antidiabetic, anticancer, antimicrobial, antioxidant, immunomodulatory, etc. It is a potent anti-inflammatory drug used in Waja ‘al-Mafāşil (Rheumatoid arthritis). The anti-inflammatory activity of Aloe barbadensis gel has been revealed by a number of in vitro and in vivo studies. Aloe barbadensis gel appears to exert its anti-inflammatory property through bradykinase activity, and thromboxane B₂ and prostaglandin F₂ inhibition. Plant sterols found in Aloe barbadensis may also contribute to its anti-inflammatory activity. It also contains salicylic acid which helps in reducing inflammation by inhibiting the production of hormones like prostaglandins.

Keywords: Aloe barbadensis, Anti-inflammatory, Anti-oxidant, Salicylic Acid

PP-COL-23

A REVIEW OF PHARMACOLOGICAL ACTIONS OF TRIBULUS TERESTRIS (KHAR KHASK) IN URINARY SYSTEM

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ABSTRACT

Objective: Tribulusterestris (kharkhask) belongs to zygophyllaceae family. It is an annual procumbent herb. Generally the whole plants are used medicinally. It is effective as diuretic, emmenagogue, lithotriptic action of bladder and kidneys, aphrodisiac, astringent, stomachic.

The aim of the review is to evaluate the drug as a potassium sparing diuretic.

Material and methods: According to review literature the diuretic properties of Tribulusterestris (TT) are due to large quantities of nitrates and essential oils present in its fruit and seeds. The diuretic activity can be attributed to the presence of potassium salts in high concentration. Majorly present constituents are furostanol glycosides, protodioscin and protogracillin and saponin. In the aqueous extract of TT shown that glycolate oxidase is one of the principal enzymes involved in the pathway of oxalate synthesis converting glycolate to glyoxylate by oxidation and finally to oxalate. The anti-urolithic activity of TT is attributed to its Gox inhibition. Quercetin and kaempferol are the active component of TT was found to be non-competitive and competitive inhibitors of Gox respectively. On the basis of investigation and results we can conclude that the aqueous extract of Tribulusterestris showed effective diuretic activity by increasing the total urine output and increase excretion of sodium and potassium salts. Further research is needed to evaluate the exact mechanism.

Key words: tribulusterestris, Diuresis, potassium salt

PP-COL-24

EVALUATION OF A PLANT BASED UNANI FORMULATION FOR ITS EFFICACY IN EXPERIMENTAL STROKE MODEL

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ABSTRACT

Cerebral stroke and cardiac arrest are the major causes of death and disability that affect millions of individuals globally. Major chunks of this population either die or become permanently disabled due to severe cerebrovascular pathology. Unfortunately, due to poor understanding of molecular mechanisms in stroke induced damage and repair, new therapeutics is yet to appear. Moreover, due to the failure of most of drugs in clinical trials recently, attentions have moved towards the traditional system of medicines including Ayurveda and Unani. One of such plant-based compounds of BALADUR (*Semecarpus anacardium*), apparently considered as poisonous, is associated with great properties including thrombolytic, anti-inflammatory and reported to be beneficial in treating neurological diseases according to Unani system of medicine. Similarly, in Ayurveda also, the same is mentioned as Bhallaataka or Bhallata and reported to be beneficial in treating different nervous diseases including rheumatoid arthritis, neuralgia and epilepsy. By considering the gap between compound's lack of relevant toxicological data with the scientific basis for its use and the actual benefit observed with the treatment, the present study was designed to study:

1. Toxicological studies – after Detoxification (as mentioned in the Unani system of Medicine), -after undergoing Acute (420) and Sub-Acute (407/Repeated dose) oral toxicity following OECD guidelines and 2. Different behavioural assays in an induced ischemic (not embolic) stroke model to evaluate the efficacy of Unani formulation of detoxified BALADUR.

The possible mechanism of Neuroprotective action of the formulation was also attempted to trace out. Our study results suggest that this formulation has a strong promise in treating ischemic diseases and needs more attention for authenticity in more human use. It also support the notion of traditional medicine that it is important to detoxify in order to make a safe dose for an apparently toxic plant product.

PP-COL-25

ANTIMICROBIAL POTENTIAL OF UNANI DRUGS—AN OVERVIEW

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ABSTRACT

Antimicrobial resistance occurs when microorganisms such as bacteria, viruses, fungi and parasites change in ways that render the medications used to cure the infections. Antibiotic and anti-fungal drugs has many mild to severe side effects such as itching, rashes, abdominal pain, nausea, hepatic

dysfunction, loss of libido, pelvic cramps, gynaecomastia, decreased production of androgen etc. Antibiotic resistance increases day by day due to the origin of new resistance of micro-organisms. Antibiotic resistance is a major health concern around the world. There is a need to develop alternative safe and effective antimicrobial drugs of traditional medicine like Unani Medicine on scientific parameters. In Unani System of Medicine treatment is done by correcting the humours (Akhlat), the Unani drugs correct the derangement of humours caused by ufunat (infection) and these drugs have been used since long by great unani physicians and scholars these drugs are considered to have Mani-i-ufunat (anti-infective) properties and helps in regaining the health. Present paper highlights the potential of antimicrobial crude unani drugs that acts as anti-infective agents.

Keywords: Antimicrobial unani drugs, Antimicrobial Resistance

PP-COL-26

TUKHME KAHU (LACTUCA SATIVA LINN.); ITS PHARMACOLOGICAL ACTIVITIES AND APPLICATIONS

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ABSTRACT

UNANI drugs have played a vital role in the prevention and treatment of number of diseases and thus they have gained popularity day by day owing to their low cost and least adverse effects. Tukhme Kahu is one of them and belongs to the family "compositae" possessing number of pharmacological activities like Mubarrid (Refrigerant), Musakkin (Sedative), Mukhaddir (Anaesthetic), Munawwim (Hypnotic), Mujaffif (Desiccative), Musaffi (Blood purifier), Dafe Tashannuj (Anticonvulsant) and Mudire Baul (Diuretic). It is recommended for various diseases like Sahar (Insomnia), Suda (Headache), Taqteerul Baul (Dribbling of urine), Sara (Epilepsy), Sailane Mani (spermetorrhoea), Humma (Fever) etc. Several studies have shown that it has sedative, hypoglycemic, anti-inflammatory and anti-hypertensive properties. It can potentially act as a strong traditional herbal drug to its multiple pharmaceutical effects and is therefore generating interest in drug discovery and development for new formulations. This review provides a summary of recent knowledge of significant traditional uses and pharmacological activities of the plant *Lactuca sativa* Linn.

Keywords: *Lactuca sativa* Linn, Anti-hypertensive, Hypoglycemic, Unani Medicine,

Hypnotic, Epilepsy

Clinical and hospital pharmacy poster

BAZEDOXIFENE-CONJUGATED ESTROGENS FOR TREATING ENDOMETRIOSIS.**Usha, Divya****Malla Reddy Pharmacy College, Hyderabad, Telangana****EMAIL:** ushapriya368@gmail.com**ABSTRACT**

The conjugated estrogen/Bazedoxifene tissue-selective estrogen complex (TSEC) is designed to minimize the undesirable effects of estrogen in the uterus and breast tissues and to allow the beneficial effects of estrogen in other estrogen-target tissues, such as the bone and brain. However, the molecular mechanism underlying endometrial and breast safety during TSEC use is not fully understood. Estrogen receptor α (ER α)–estrogen response element (ERE)–DNA pull-down assays using HeLa nuclear extracts followed by mass spectrometry–immunoblotting analyses revealed that, upon TSEC treatment, ER α interacted with transcriptional repressors rather than coactivators. Therefore, the TSEC-mediated recruitment of transcriptional repressors suppresses ER α -mediated transcription in the breast and uterus. In addition, TSEC treatment also degraded ER α protein in uterine tissue and breast cancer cells, but not in bone cells. Interestingly, ER α -ERE-DNA pull-down assays also revealed that, upon TSEC treatment, ER α interacted with the F-box protein 45 (FBXO45) E3 ubiquitin ligase. The loss-of- and gain-of-FBXO45 function analyses indicated that FBXO45 is involved in TSEC-mediated degradation of the ER α protein in endometrial and breast cells. In preclinical studies, these synergistic effects of TSEC on ER α inhibition also suppressed the estrogen-dependent progression of endometriosis. Therefore, the endometrial and breast safety effects of TSEC are associated with synergy between the selective recruitment of transcriptional repressors to ER α and FBXO45-mediated degradation of the ER α protein.

KEYWORDS: Bazedoxifene, endometriosis, estrogen receptor α protein, breast cancer cells.**HOW PHARMACISTS CAN ENCOURAGE PATIENT ADHERENCE TO DRUGS****Ambika, Haritha****MallaReddy Pharmacy College, Hyderabad, Telangana****EMAIL:** haritha0209@gmail.com**ABSTRACT**

The problem of poor patient adherence has been extensively researched, but the rates of nonadherence

have not changed much in the past 3 decades. Healthcare providers play a unique and important role in assisting patients' healthy behavior changes. We conducted a narrative review of the current literature to help providers become more familiar with proven interventions that can enhance patient adherence. We then grouped the interventions into categories that can be remembered by the mnemonic "SIMPLE". Evaluating adherence, Chronic lifestyle behavior change often requires a combination of all the aforementioned strategies. We suggest a conceptual framework, which calls for a multidisciplinary approach with the above strategies in the context of a healthcare team and system-related factors. We hope that this framework would not only help design scientifically proven interventions, but also reduce the time and cost involved with implementing these strategies in a healthcare setting. Simplifying regimen characteristics; Imparting knowledge; Modifying patient beliefs; Patient communication; Leaving the bias; and evaluating adherence. Over the last few years, various constructs of adherence have been conceptualized, and extensive research on the efficacy of adherence-enhancing strategies has been performed. One significant development has been the inclusion of the patient in the determination and success of therapy, with the term "adherence" seeming to indicate this action more accurately than "compliance." However, the rates of non-adherence have not changed much over the past 3 decades. Recent reviews have shown that as many as of patients still do not adhere to their treatment regimens. One possible reason could be the lack of consensus guidelines on this issue. Many of the studies and reviews done have been narrowly focused on one disease condition or one kind of adherence-enhancing strategy. Although this may be useful in a research setting, this fragmented approach may not be practical for healthcare providers dealing with a diverse patient population. In addition, most of the literature on patient adherence has been published in social science journals rather than in the medical literature. This study provides a current review of critical adherence-enhancing interventions across a broad spectrum of patients and diseases and suggests an integrated framework to facilitate their implementation in clinical settings.

KEYWORDS: Adherence, Healthcare providers, Chronic life style, Compliance

PP-PP-03

A CASE REPORT ON SCHIZOPHRENIA FOUND IN TERTIARY CARE HOSPITAL

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ABSTRACT

Schizophrenia is a severe disorder and chronic psychiatric disorder characterized by hallucinations, delusions, and cognitive dysfunction that frequently leads to a life time impairment and disability. The purpose of this case report is to demonstrate the importance of a thorough patient overview. The concept of schizophrenia can be extremely varied with great range of possible symptoms may be positives and negatives. Affective episodes may occur during the course of illness and however the total duration must be less than the total duration of the active and continuous phase periods. Simple schizophrenia remains controversial. In this study we illustrate the complexities of the disorder. The case involves a man referred for abnormal behaviour, duration 2 years during the patient interview. A 24-year-old male patient with abnormal behaviour, does not obey commands, eats leaves, hallucinations. The patient was referred for further medical investigation, as he was demonstrating

signs suggestive of a psychiatric disorder. The patient was diagnosed with schizophrenia by a psychiatrist and was prescribed with serenade and phenegran. This case study reinforces the importance of a thorough patient interview by physical therapists to rule out psychotic disorders. Patients seeking anti- psychotic assessment and treatment may have undiagnosed primary or secondary psychiatric disorders that require recognition by physical therapists and possible medical referral.

Keywords: Patient interview, psychiatric disorder, psychotic assessment, referral source, schizophrenia, hallucinations.

PP-PP-04

ASSESSMENT OF RATIONAL USE OF FIXED DOSE COMBINATION IN A TERTIARY CARE HOSPITAL AT HYDERABAD

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Aim

To study about the rationality of different fixed dose combinations prescribed by doctors in a tertiary care hospital at Hyderabad.

Methodology

A total of 376 prescriptions were collected and evaluated for the presence of fixed dose combinations. The data was collected through counseling forms and patient profile forms made available by the institution and the tertiary care hospital unit. This study was carried out over a period of 8 months.

Results

Out of 376 prescriptions 172 were females and 204 were males. Maximum number of prescriptions was obtained from the age groups of 41-60 with 142 prescriptions. 60, 25, 5 and 4 prescriptions were found with three, four, five and six FDCs respectively. All the FDCs were prescribed by brand names. The highest number was prescribed as Antimicrobials with 19% and next to that was Antacids with 16%. 2% of FDCs were present in WHO essential drug list, 2% was as per NLEM, 47% FDCs were present in Drug Controller General (DCG) and 49% of FDC combinations were not present in any of the list. This study highlights the importance and need of awareness programs focusing on the deleterious consequences related to irrational use of medicines to ensure that the prescriber's knowledge and skills to prescribe rationally is updated frequently.

Keywords: Fixed dose combinations, rational use, banned FDCs, irrational FDCs

IMPACT OF PATIENT COUNSELING IN DIABETIC OUT PATIENTS**SheneelaRazvi*, N Anitha, AnupamaKoneru****Sultan-ul-Uloom College of Pharmacy, Road No.3, Banjara Hills, Hyderabad-34****Email: sheneelarazvi1472@gmail.com****Aim**

To find out the impact of patient counseling in diabetic out patients in an urban tertiary care hospital at Hyderabad metropolitan.

Methodology

A total of 170 patients were considered for the study. The data was collected through counseling forms and patient profile forms made available by the institution and the tertiary care hospital unit. This study was carried out over a period of 8 months.

Results

Out of 170 patients, the patients with age group in the range of 41 to 60 were more prone to diabetes mellitus than other age groups. The Co morbidities data were also collected, and found that maximum number of patients were affected with cardiovascular diseases. Patient's leaflets were used to do the patient counseling regarding the disease, medication and lifestyle modifications. Due to this counseling it was found that there was decrease in glycemic levels, cholesterol levels and HbA1c.

Out of 170 patients, Ninety patients were categorized as overweight as their principal cut off range of BMI was found to be between 25 to 30. Nine patients were categorized as obese as their principal cut off range of BMI was found to be between 30 to 40. The effect of counseling found that fasting plasma glucose level and postprandial plasma glucose level of all the patients included in the study were significantly reduced.

Keywords:- Diabetes, patient counseling, BMI, HbA1c, glucose level

ROLE OF METFORMIN IN THE MANAGEMENT OF POLYCYSTIC OVARY SYNDROME (PCOD)**Mehraj*, N. Anusha Reddy, Sowmya, Sonia****Malla Reddy Pharmacy College (Dhulapally, Maisammaguda)****EMAIL: anuureddy2011@gmail.com**

ABSTRACT

Polycystic ovary syndrome is the most common endocrinological disorder affecting 4-12% of women and also most controversial. Metformin was logically introduced to establish the extent to which hyperinsulinaemia influences pathogenesis of the condition. early studies were encouraging. Randomized controlled studies and several meta analysis have changed the picture and put the drug that was once heralded as magic in a much contracted place. More work is needed to establish its right place in particular with regards to the prevention of many gestational and long term complications.

PP-PP-07

AN OVERVIEW OF NON-DRUG THERAPIES FOR THE TREATMENT OF EPILEPSY

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ABSTRACT

Epilepsy is one of the most common neurological disorders, characterized by recurrent spontaneous seizures and a major health problem that affects around 1-2% of the population worldwide. The treatment generally includes antiepileptic drug therapies. However, despite the development of various antiepileptic drugs, about a third of patients are resistant to current pharmacotherapies. Non-drug therapies are also expanding in an exciting and unprecedented way since in patients with drug resistance, non-drug therapies like surgeries; implantable devices and diet are playing a key role in improving the quality of patients life. In this review, the patients with drug resistance have been highlighted. Initial results from these therapies are quite promising, but considerable development is required before these treatments earn a place in the standard clinical care.

Keywords: Non-drug therapies, Diet therapy, Devices, Radiosurgery, Epilepsy.

PP-PP-08

THE SPINTRONIC SCANNER FOR CANCER DETECTION

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Spintronics is a study that deals with spin of an electron, also known as magnatoelectronics, is an emergent technology which exploits the quantum property of electrons to spin as well as making use of their charge. There are two spins (UP spin and DOWN Spin). This spintronic scanning technique is an efficient technique used in t

he medical field to detects cancer cells. Cancer cells are easy to be identified only when they are large in number. These cells when matured results in formation of tumor, which has to be removed by surgery. After surgery there may be presence of even a single cancer cell, which would result in growth of tumor in effected part of the body. The spintronic scanning is an efficient technique to detect cancer cells even when they are less in number. Patient is exposed to a strong magnetic field so that his body cell gets magnetized. beam of electrons with polarized spin is introduced on the uneffected part of the body and the change in spin is detected by a polarimeter. A beam of electrons with polarized spin is introduced on the part which had undergone surgery.

The difference in spin of electrons when introduced to normal area and

Abnormal

area indicates whether cancer cells have been removed from the body. If not, it indicates the presence of traces of cancer cells and it has to be treated again for ensuring complete safety to the patient.

Thus this technique efficiently identifies the presence of cancer cells in that part

of the body that has undergone surgery to prevent any further development.

Keywords :- spin electron ,cancer cells

PP-PP-09

NIPAH VIRUS: AU COURANT

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ABSTRACT

Nipah Virus is a newly emerging zoonosis that causes a severe disease in both animals and humans. The NiV (nipha virus) infection in humans has a range of clinical consequences, from asymptomatic infection to acute respiratory syndrome and fatal encephalitis. NiV is also capable of causing disease in pigs and other domestic animals. There is no vaccine for either humans or animals. The natural hosts of the virus are fruit bats of the Pteropodidae Family, Pteropus genus. NiV was first identified during an outbreak of disease that took place in Malaysia in 1998, pigs were the intermediate hosts. The symptoms start to appear within 3–14 days after exposure, Symptoms of the infection vary from none to fever, cough, headache, shortness of breath, and mental confusion, disorientation and this may worsen into a coma over a day or two. Encephalitis (inflammation of the brain) is a potentially fatal complication. Epidemiologists have identified three pathways of transmission of NIV from bats to people, the most frequently implicated route is ingestion of fresh date palm sap as fruit pulp or date palm juice, NiV can go from bats to people via domestic animals and some people may come into direct contact with NiV-infected bat secretions and getting in contact with the fluids of the infected person. Prevention of this virus infection is important since there is no effective treatment for the disease. This can be prevented by avoiding exposure to bats in endemic areas and sick pigs. Drinking of raw palm sap (palm toddy) contaminated by bat excretes, eating of fruits partially consumed by bats and using water from wells infested by bats should be avoided. Surveillance and awareness are important for preventing future outbreaks. The association of this

disease within reproductive cycle of bats is not well studied. A subunit **vaccine using the Hendra G protein** was found to produce cross-protective antibodies against henipavirus and nipavirus has been used in monkeys to protect against Hendra virus, although it's potential for use in humans has not been studied. Scientists at the **National Institute of Virology (NIV)** have confirmed the efficacy of **Ribavirin, chloroquine** was shown to block the critical functions needed for maturation of Nipah virus, although no clinical benefit has yet been seen.

KEYWORDS: Fatal encephalitis, Pteropodidae, Hendra G protein, Ribavirin, chloroquine

PP-PP-10

Aim:

To compare the efficacy of *Saccharomyces boulardii* with *Lactobacillus sporogenes* in children with acute gastroenteritis.

Introduction:

Acute gastroenteritis is an infection or irritation of the digestive tract particularly stomach and intestine. It is sudden onset of diarrhea or vomiting.

Probiotics are non-pathogenic living microorganisms which, when administered in sufficient quantities have a beneficial effect on the host. They are largely anaerobic organisms and prevent pathogenic microorganisms from growing in the human gut. It acts as adjuvant therapy for Oral Rehydration therapy in diarrhea condition.

Objectives:

- To study the usefulness of probiotic in children in reducing the stool frequency.
- To study the usefulness of probiotic in children in improving the stool consistency.
- To assess the duration of hospital-stay with the use of probiotic.

Methods:

The study was prospective randomized observational study conducted over a period of six months from September to march. Study procedure includes data collection form, patient consent form and patient information form.

Results:

- The statistical test two-way Anovawas used to compare the effect of two probiotics on stool frequency, which showed that *S.boulardii* has more effect on decreasing the stool frequency.
- Consistency of stools improved within 48 hours in both treatment groups.
- Statistical t-test was used to compare the Hospital stay in two groups which showed that patients treated with *S.boulardii* were discharged earlier than those treated with *L.sporogenes*.

Conclusion:

From this study, we have concluded that, *Saccharomyces boulardii* is more efficacious than *Lactobacillus sporogenes* in reducing stool frequency, in improving stool consistency and decrease in duration of hospital stay.

PP-PP-11

STUDY ON PRESCRIPTION PATTERNS OF LEVOTHYROXINE

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ABSTRACT

Introduction: Hypothyroidism is the clinical and biochemical syndrome resulting from decreased thyroid hormone production, respectively. Hypothyroidism is more common in women, people with other Thyroid problems, and those over 60 years old.

Objective: To assess the levothyroxine therapy in hypothyroidism patients. To assess the variety of factors such as advancing age., comorbidities like cardiovascular diseases, hypertension, diabetes mellitus., and pregnancy associated with hypothyroidism and to evaluate the need for dose adjustments

Methodology: In the current clinical research study, we have performed a cross-sectional observational study regarding prescription patterns of levothyroxine in patients with hypothyroidism.in General Medicine Department. This study was conducted solely at “DurgabaiDeshmukh Hospital” under expertise doctor guidance. Extensive study of six months has been done on 96 subjects and results have been interpreted.

Results: Among 96 patients 10(10%) are males and 86(90%) are females. Among all age groups major number of hypothyroidism patients were seen in 20-40 years (35.4%) and >60years (35.4%). The hypothyroidism patients with comorbidities and other conditions include Hypertension (33%), Diabetes (26%), Cardiovascular disease (9%), Pregnancy (9%), Elderly (24%). Patients with past history of hypothyroidism since years include <1yr (8), 1-5yrs (32), 6-10yrs (29), 11-15yrs (11), 16-20yrs (9), 21-25yrs (0), >25yrs (7). Among the total patients below, normal and above range of TSH include <0.5 μ IU/ml (5), 0.5-5 μ IU/ml (63), >5 μ IU/ml (28). Percentage of patients are given with various doses of levothyroxine 12.5 μ g for 4.1%, 25 μ g for 14.5%, 50 μ g for 32.3%, 75 μ g for 16.6%, 100 μ g for 25%, 125 μ g for 5.2%, 150 μ g for 5.2%. Male patients are given with various doses of levothyroxine 50 μ g for 60%, 75 μ g for 20%, 150 μ g for 20%. Female patients are given with various doses of levothyroxine 12.5 μ g for 3.5%, 25 μ g for 14%, 50 μ g for 30.23 %, 75 μ g for 16.3 %, 100 μ g for 27%, 125 μ g for 7%, 150 μ g for 2.3%.

Conclusion: Within our study of Prescribing patterns of 96 patients, we have observed that fine tuning in dose of Levothyroxine was not done based on Comorbidities, certain conditions and weight., but solely based on TSH.

The dose adjustment of Levothyroxine in patients with hypothyroidism should be done on basis of comorbidities and other conditions. This has to be implemented in clinical practice.

PP-PP-12

THE ROLE OF PHARMACIST IN ANTIBIOTIC RESISTANCE

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ABSTRACT

Antibiotics are medicines used to prevent and treat bacterial infections. Antibiotic resistance occurs when bacteria change in response to the use of these medicines. Bacteria become antibiotic resistant and these bacteria may infect humans and animals, and the infections they cause are harder to treat than those caused by non-resistant bacteria. Antibiotic resistance leads to higher medical costs, prolonged hospital stays, and increased mortality.

The pharmacist's role in combating and preventing infectious diseases is essential as antibiotic and vaccine regimens become more complex due to the continuously evolving epidemiology of infections. The decrease in drug development makes the preservation of currently available antibiotics paramount, highlighting the roles that pharmacists play in maximizing the utility of available drugs. While further training in infectious diseases may be necessary for some pharmacist roles in preventing antibiotic resistance, many others exist that all pharmacists can embrace. Pharmacist-directed antibiotic stewardship programs (ASPs) have proliferated considerably in the past decade. After evidence emerged that these programs improve patient care, the Infectious Diseases Society of America and Society for Healthcare Epidemiology of America published a guideline for the development of ASPs specifying that an infectious diseases-trained clinical pharmacist was an essential core member. As resistance has increased and antibiotic development has lagged, ASPs have become important to improve clinical outcomes, prevent resistance, and decrease adverse events such as *Clostridium difficile* infections. ASPs take many forms, but all utilize a team approach to improve the utilization of antibiotics through means such as interventions on individual patients, guideline development, and system-wide improvement.

KEYWORDS:

Antibiotics, Antibiotic resistance, Antibiotic stewardship programs (ASP).

ASPROSIN:A NATURAL HORMONE,OPENS NEW ERA OF TREATMENT FOR TYPE 2 DIABETES

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Research on patients suffering from a rare genetic condition called neonatal progeroid syndrome has now turned into a new discovery that has prominent role in treating type 2 diabetes. Asprosin is a peptide hormone produced by white adipose tissue that stimulates liver to release glucose into blood stream by cAMP dependent pathway. Patients with NPS lack asprosin while people with insulin resistance have in abundance. NPS is an autosomal recessive disorder characterised by subcutaneous lipoatrophy. NPS represent a complex of symptoms with unknown cause and pathogenesis. Low levels of asprosin in NPS patients is due to absence of subcutaneous fat under the skin. Type 2 diabetes is characterised by insulin resistance. Insulin resistance is a pathological condition in which cells fail to respond normally to the hormone insulin which is essential for glucose uptake. Obesity is one of the major causes of type 2 diabetes. Excessive white adipose tissue and abundant subcutaneous fat is the underlying cause for increased asprosin levels. Pre clinical trials on diabetic mice by administering an antibody against asprosin dropped their plasma insulin levels suggesting the hormone might be a target to treat diabetes.

Keywords :Asprosin,(NPS)Neonatal progeroid syndrome,Subcutaneous lipoatrophy.

BIOARTIFICIAL PANCREAS

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The artificial pancreas is a Technology in the development to help people with diabetes automatically controls their blood glucose level by providing the substitute endocrine functionally of a healthy pancreas. The bio engineering approach the development of a bio-artificial pancreas consisting of a bio compatible sheet of encapsulated beta cells. When surgically implanted, the islet sheet will behave as the endocrine pancreas and will be viable for years. The gene therapy approach the therapeutic inflation of diabetic person by a genetically engineered virus which causes a DNA change of intestinal cells to become insulin producing cells. The goal of the artificial pancreas two-fold. 1. to improve insulin replacement therapy until glycemic control is practically normal as evident by the

avoidance of the complications of hyper glycemc . 2.to ease the burden of therapy for the insulin dependent.

Keywords:Bio compatible, artificial pancreas insulin

PP-PP-15

Abstract:

Introduction: Cardiovascular disease is the single largest cause of death worldwide and is commonly associated with myocardial infarction. In 1990 STEMI accounted for nearly 50% of all cases of acute coronary syndromes (ACS). Since then the incidence of STEMI has declined steadily and in recent years STEMI represents 25% to 40% of all cases of acute MI. In hospital mortality is 5% and one year mortality is 7-18%.

Objective: To study & compare the effectiveness and adverse reactions of the three thrombolytic agents.

Methodology: A prospective study will be carried out in STEMI patients to study & compare the effectiveness and adverse reactions of Streptokinase, Reteplase&Tenecteplase in the Department of Cardiology, DurgabaiDeshmukh Hospital, a 300 bedded multi-specialty hospital from September 2017 to March 2018.

Results: Among the total number of Patients (50), Streptokinase was given in 14%, Reteplase was given in 32% and Tenecteplase was given in 54% of the patients. Among the total patients who were given Streptokinase (7), the ECG resolution was complete in 4, partial in 1 and nil in 2. 1 developed GI bleed and 6 developed no complications. Of the total patients who were given Reteplase (16), the ECG resolution was complete in 11, partial in 2 and nil in 3. 1 developed hypotension, 1 developed tachycardia and 14 developed no complications. Of the total patients who were given Tenecteplase (27), the ECG resolution was complete in 16, partial 1 and nil in 10. 5 developed hypotension, 1 developed tachycardia, 3 developed GI bleed and 18 developed no complications.

Conclusion: From this study we have concluded that all the three thrombolytic drugs given were similar in their effectiveness based on the ECG resolutions and the complications. Overall complications of all the drugs were similar but slightly high in Tenecteplase as the number of cases were also high when compared to the other 2 drugs. Finally we conclude that all the three drugs are similar in the effectiveness and adverse effects. The selection of drug completely depends on the patient's choice.

PP-PP-16

STUDY OF EFFICACY OF SULPHASALAZINE VS ACECLOFENAC IN PAIN MANAGEMENT OF OSTEOARTHRITIS: PROSPECTIVE RANDOMIZED STUDY

ABSTRACT

AIM:To study the efficacy of Sulfasalazine v/s Aceclofenac in pain management of Osteoarthritis of Knee.

INTRODUCTION: Osteoarthritis (OA) is cartilage failure resulting in joint pain and loss of joint functions. Knee OA is the OA of knee that mechanical forces have major effect on initiation and progression of it. Knee OA is the most common disease of knee especially in the middle to old ages.

OBJECTIVE: Comparison and clinical evaluation of efficacy of both sulfasalazine (SSZ) vs Aceclofenac in Osteoarthritis of Knee by patients symptoms (pain scale-visual analogue scale).

METHODOLOGY: A Randomized Prospective study will be carried out in Osteoarthritis patients to evaluate the efficacy of Sulfasalazine vs Aceclofenac in the department of Orthopaedics, Durgabai Deshmukh Hospital, a 300 bedded multispecialty hospital from September 2017-March 2018.

RESULTS: Among the total number of Patients (60), Aceclofenac is given in 45%, Sulfasalazine is given in 55% of the Patients. Sulfasalazine is effective in 72%, and Aceclofenac is effective in 27% of Patients with Osteoarthritis of Knee.

CONCLUSION: From this study we have concluded that Sulfasalazine is effective than Aceclofenac with respect to pain relief (VAS) and safety among patients with Osteoarthritis of the knee. Therefore, we think that Sulfasalazine is a safe and effective medicine that would provide effective pain management and improved quality of life in patients with OA of the knee.

PP-PP-17

Dr OR Dr.GOOGLE ? THE PROS AND CONS OF ONLINE DIAGNOSIS

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ABSTRACT

Today there are thousands of internet websites that can be used to access health information, research, ordering prescription medication, learning about illness etc. But when it comes to simple health complains, are we taking risk with our health by relying on internet too much? This argument has its pros and cons. Self diagnosis is the process of diagnosing or identifying medical condition in oneself to decide whether to seek medical or not. There are various reasons people opt for self diagnosis and they include: affordability, ease of access of internet, anxious or embarrassed, trust, cost of treatment etc. Most importantly most of the problems go away on their own before approaching a doctor anyway. It is helpful to reduce expenses associated with office visits, less time consuming, good information and self education. However, it comes with the cons like: it is not tailored advice, it leads to misdiagnosis, failure to diagnose a serious illness, risk of wrong treatment leading to drug resistance. Hence internet is a great way to expand knowledge as far as you are aware of limitation and pitfalls. The best way to avoid the cons and yet take full advantage of the pros is to reinforce your doctor's advice, upgrade your knowledge regarding your treatment only after a proper visit and after taking a prescribed treatment from a registered medical practitioner.

KEY WORDS: pros and cons, tailored advice, ease of access, economic status

PP-PP-18

RENAL DISEASES ASSOCIATED WITH ANTI RETRO VIRAL THERAPY

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ABSTRACT

Kidney disease, which is a common complication of HIV infection and its treatment, may shorten the lifespan of affected patients. HIV-related renal impairment can present as acute or chronic kidney disease, it can be caused directly or indirectly by HIV and/or by drug-related effects that are directly nephrotoxic or lead to changes in renal function by inducing metabolic vasculopathy and renal damage. Antiretroviral therapy has converted HIV infection to a chronic illness. Anti-retroviral therapy is a double-edged sword, although it can lead to improvement of life expectancy but can also increase clinical uncertainty in renal function.

Selected antiretroviral agents, especially tenofovir disoproxil fumarate (TDF) and some ritonavir-boosted protease inhibitors (PI/r), have been associated with increased risk of CKD. Selected antiretroviral agents, especially tenofovir disoproxil fumarate (TDF) and some ritonavir-boosted protease inhibitors (PI/r), have been associated with increased risk of CKD. Tenofovir alafenamide (TAF), a TDF alternative, promises to be safer in terms of TDF-associated kidney and bone toxicity. Promising results have also emerged from recent trials on alternative dual-therapy antiretroviral regimens. Benefits of dual therapy regimens include reduced toxicity, improved tolerability and adherence, and reduced cost.

KEYWORDS: Anti retro viral therapy, dual therapy regimen , TDF , HIV , Protease inhibitors , Renal impairment.

PP-PP-19

THE STUDY OF HEMODYNAMIC CHANGES IN PATIENT RECEIVING INTRAVENOUS PARACETAMOL

Kanth Reddy

ABSTRACT

Introduction: The hemodynamic effects of intravenous Paracetamol formulations are largely understudied. There is an emerging body of evidence suggesting that intravenous paracetamol may cause iatrogenic hypotension. Little is known as to the mechanisms of this phenomenon or if intravenous paracetamol indeed thus cause hypotension.

Objective: To determine the effect of intravenous Paracetamol on body temperature, blood pressure, pulse rate and respiratory rate.

Methodology: A prospective study will be carried out to evaluate the hemodynamic changes in patients receiving intravenous Paracetamol in department of General Medicine, DurgabaiDeshmukh hospital, a 300 bedded multi speciality hospital from September 2017 to March 2018.

Results: Among 60 patients receiving intravenous Paracetamol 31(52%) patients were male and 29(48%) patients were females, in which 49(82%) patients were given intravenous Paracetamol for fever indication and 11(18%) patients were given intravenous Paracetamol for pain indication. For these 60 patients the vitals like pulse rate 47(78%), respiratory rate 43(72%), body temperature 46(77%) and blood pressure 31(52%) was changed. Among fever indicated patients change in blood pressure was seen in 26(53%) and in pain indicated patients change in blood pressure was seen as 5(45%). Whereas, the change in blood pressure either in systolic or diastolic were seen in the range of 10mmHg, which is not significantly affect the patient condition.

Conclusion: From this study, we have concluded that the changes in blood pressure are in the range of 10mmHg difference which does not indicate hypotensive condition in the patients. Therefore, no need of any interventional therapy required for the patients receiving intravenous Paracetamol.

PP-PP-20

GENE THERAPY FOR HEMOPHILIA-A

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ABSTARCT

Hemophilia is an X linked recessive inherited genetic condition in which a person lacks or has low levels of certain proteins called “clotting factors” by which blood doesn’t clot properly which leads to excessive bleeding. There are 13 types of clotting factors, and these work with platelets to help the blood clot. Hemophilia A is the most common type of hemophilia, it’s caused by a deficiency in factor VIII(AHF-A). Hemophilia B is caused by a deficiency in factor IX(AHF-B/christmas factor/PTC) and is also called as Christmas disease. Hemophilia C is a mild form of the disease that’s caused by a deficiency of factor XI (AHF-C/PTA).

According to the World Federation of Hemophilia (WFH), about one in 10,000 people are born with this disease. According to the National Heart, Lung, and Blood Institute (NHLBI), 8 out of 10 people with Hemophilia have Hemophilia A. In India, 1 in 5000 people are affected with hemophilia A. Significant progress has been made on the development of gene therapy for the treatment of hemophilia A rather than frequent intravenous infusion of highly expensive proteins that have short half-lives. Gene therapy holds out the hope of a cure by inducing continuous endogenous expression

of factor VIII following transfer of a functional gene to replace the hemophilic patient's own defective gene.

KEY WORDS: Hemophilia, gene therapy, X-linked recessive disease, inherited, bleeding.

ABBREVIATIONS: AHF(Antehemophilic factor), PTA(Plasma thromboplastin antecedent), PTC(Plasma thromboplastin component), PWH(People with hemophilia).

PP-PP-21

PERNICIOUS ANAEMIA

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ABSTRACT

Pernicious anaemia; a chronic disorder caused due to auto-immune gastric atrophy of parietal cells resulting in vit-B12 deficiency. It is most common in the northern European ancestor and people with blood group A and It is also seen in the people with age above 60years. Symptoms include glossitis, macrocytic anaemia, nerve damage .If left untreated it may leads to death. Diagnosed by schilling test, biopsy, IF deficiency test. Incubation period is very long because of this signs and symptoms can not be seen earlier . Due to Vit-B12 deficiency there is no proper formation of DNA which results in bone marrow depression and release of immature blasts into blood stream which cause decrease in oxygen carrying capacity. As a result of this work load on the heart get increased to compensate oxygen levels required for body . We can treat this condition by giving vit- B12 supplements, dietary foods like meat, milk, poultry and eggs. Iron rich foods like spinach and beans. In severe conditions blood transfusion is done.

Key words:- atrophy, schilling test, macrocytic anaemia, immature blasts.

PP-PP-22

REGENERATIVE POTENTIALS OF NEUROSTEROIDS IN MODULATION OF NEURONAL DISORDERS

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ABSTRACT

Impact of neurosteroids on brain and their therapeutic potentials is summarized. Neurosteroids are endogenous or exogenous steroids that are synthesized within the brain or reach the brain through blood stream. They are responsible for rapidly altering neuronal excitability through interaction with ligand-gated ion channels and other cell surface receptors. They are classified

as pregnane neurosteroids (allopregnanolone and allotetrahydrodeoxycorticosterone), androstane neurosteroids (androstenediol and etiocholanolone) and sulfated neurosteroids (pregnenolone sulphate). Pregnane neurosteroids are positive allosteric modulators of GABA-A receptors with powerful antiseizure activity. They are endogenous regulators of seizure, anxiety, and stress. Sulfated neurosteroids are negative GABA-A receptor modulators acting as memory-enhancing agents. Neurosteroidogenic agents that lack benzodiazepine-like side effects show promising outcomes in the treatment of anxiety and depression. Steroids in the nervous system require coordinated expression and regulation of genes encoding the steroidogenic enzymes in several different cell types (neurons and glia). It produces a spectrum of effects in CNS disorders via positive allosteric modulation of the GABA-A receptor and exhibit quantitative and qualitative differences.

Keywords: Neurosteroids, GABA-A modulators, epilepsy, alzheimer's disease, depression, insomnia, anxiety.

PP-PP-23

STATINS : THE GOOD, THE BAD, AND THE UNKNOWN

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ABSTRACT

Statins are established class of drugs with proven efficacy in cardiovascular risk reduction. The concern over statin safety was first raised with the revelation of myopathy and rhabdomyolysis with the use of withdrawn cerivastatin. Enhanced understanding of the mechanism behind adverse effects of statins including an insight into the pharmacokinetic properties have minimised fear of statin use among clinicians. Studies reveal that occurrence of myopathy and rhabdomyolysis are rare 1/10000 patient-years. The risk of myopathy/ rhabdomyolysis varies between statins due to varying pharmacokinetic profiles. This explains the different abilities of statins to adverse effects. Higher dose of rosuvastatin (80 mg / day) was associated with proteinuria and hematuria while lower doses were devoid of such effects. Awareness of drugs interacting with statins and knowledge of certain combinations such as statins and fibrates together with monitoring of altered creatine kinase activity may greatly minimise associated adverse effects. Statins also asymptotically raise levels of hepatic transaminases but are not correlated with hepatotoxicity. Statins are safe and well tolerated including more recent potent statins, such as, rosuvastatin. The benefits of intensive statin use in cardiovascular risk reduction greatly outweigh risks. The present review discusses underlying causes of statin-associated adverse effects including management in high risk groups.

Keywords: myopathy, rhabdomyolysis, safety for statins, proteinuria, hematuria, cardiovascular risk, hepatotoxicity.

PSORIASIS

ABSTRACT

It is a common chronic, recurrent, immune mediated disease of the skin and joints. It can have a significant negative impact on the physical, emotional, and psycho social wellbeing of affected patients. Psoriasis is found worldwide and is prevalent among different ethnic groups. Psoriasis is a papulosquamous disease with variable morphology , distribution , severity , and course .There are several clinical cutaneous manifestations of psoriasis but most commonly the disease presents as chronic , symmetrical , erythematous , scaling papules and plaques . The lesions are typically distributed symmetrically on the scalp , elbows , knees , lumbosacral area , and in the body folds . Clinical types of psoriasis are plaque psoriasis ,guttate psoriasis , flexural (inverse)psoriasis , generalized pustular psoriasis , palmoplantarpustulosis , psoriatic nail disease . Psoriasis is a skin disease with unknown etiology. The treatment is done by topical treatment , light therapy (photo therapy) solar ultraviolet (UV) ,sunlight , UV-B photo therapy , narrow band UV-B therapy , Goekerman therapy , Photo chemotherapy , Excimer laser , Pulsed dye laser , Systemic treatment : oral or injected medications , Retinoid , Methotrexate (MTX) , etc : Photo therapy is generally the first-line treatment for patients with extensive psoriasis or disabling symptoms . Psoriasis is a common skin disorder that needs long-term management , not only because of its prevalence but also because of the profound impact it can have on quality of life .

KEYWORDS: chronic , clinical cutaneous manifestations , erythematous , papulosquamous , lesions , etiology , photo therapy.

MANAGEMENT OF NAUSEA AND VOMITING DURING PREGNANCY

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ABSTRACT

Nausea and vomiting are the most common symptoms of pregnancy. As a result many medicalpractitioners will encounter this problem and should be familiar with the appropriate investigations andcurrent treatment options. Nausea and vomiting affect 50-90% of pregnant women, and in about 35%of these women symptoms are of clinical relevance, with both physical and psychosocial sequelae.Although colloquially referred to as “morning sickness,” for many women symptoms persist over thewhole day, with a broad spectrum of severity ranging from occasional nausea to fulminant andintractable vomiting. Nausea and vomiting begin in the first trimester, at about six to eight weeks’ gestation, typically peaking at about nine weeks’ gestation and settling by about 12 weeks. Only aminority of women have symptoms after 20 weeks of gestation. Adequate oral hydration

and avoidance of dietary triggers are often sufficient, but a proportion of women with severe and protracted nausea and vomiting will need antiemetic drugs. Carefully assess and treat all women who present with severe nausea and vomiting in pregnancy because this may obviate the need for admission. In hyperemesis gravidarum, many women will need to be admitted to hospital so that they can receive intravenous rehydration and parenteral antiemetic drugs to avoid serious maternal and fetal morbidity.

PP-PP-26

STANDARD APPROACHES FOR DRUG TAPERING - A REVIEW

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ABSTRACT

Drug tapering is the process of slowly decreasing the therapeutic dose of the drug that is being taken over a period of time. Most of the drugs cause lethal effects on sudden withdrawal. Tapering is the process that helps in preventing the undesirable effects of withdrawal, dependence and discontinuous syndrome and it also improves patient's compliance. The Methods of drug tapering involves Direct tapering, Substitution tapering and Titration tapering. Most commonly tapered drugs include opioids (morphine, methadone), benzodiazepines (diazepam, lorazepam), anti-depressants (fluoxetine, paroxetine) and corticosteroids (prednisolone, dexamethasone). Benzodiazepines commonly used to treat insomnia and anxiety disorder are tapered to reduce dependence and lower the risk of future adverse drug-related risks such as falls, while, the anti-depressants and opioids are tapered to reduce discontinuous symptoms. All of these classes of drugs must be reduced for about 10% of initial dose every 1-2 weeks until the lowest available dose is obtained. On the other hand, the tapering of corticosteroids gives the adrenal gland time to return to their normal patterns of secretion. The tapering of corticosteroids must be reduced for about 50% of initial dose every 3-4 weeks until the lowest available dose is obtained. The present review summarizes the need and various strategies of tapering these medications as per the standardized guidelines.

PP-PP-27

INHALED INSULIN: A NOVEL ROUTE OF INSULIN ADMINISTRATION

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ABSTRACT

Diabetes is a chronic disease characterized by inadequate insulin secretion with resulting hyperglycemia. Diabetes complications include both microvascular and macrovascular disease, both of which are affected by optimal diabetes control. Many individuals with diabetes rely on subcutaneous insulin administration by injection or continuous infusion to control glucose levels. Novel routes of insulin administration are an area of interest in the diabetes field, given that insulin injection therapy is

burdensome for many patients. This review will discuss pulmonary delivery of insulin via inhalation. The safety of inhaled insulin as well as the efficacy in comparison to subcutaneous insulin in the various populations with diabetes is covered. In addition, the experience and pitfalls that face the development and marketing of inhaled insulin are discussed. Shortly after Banting and Best discovered insulin in the early 1920s the first studies using inhaled insulin were performed. In these studies, it was reported that blood glucose decreased in response to inhalation of insulin.^{14,20} In 1987, it was demonstrated that nebulized human insulin provided blood sugar control comparable to subcutaneous insulin in 6 children with T1DM.²¹ However, it was recognized that the bioavailability of inhaled insulin was significantly lower than that of subcutaneous preparations. Consequently, it was not until the development of improved delivery devices and understanding of particle pharmacology that inhaled insulin became ready for clinical study.

PP-PP-28

PHARMACOVIGILANCE AND ADVERSE DRUG REACTION

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ABSTRACT

Pharmacovigilance (PV) is the practice of monitoring the effects of medical drugs after they have been licensed for use. It is also known as Drug Safety relating to the collection, detection, assessment, monitoring and prevention of adverse effects with pharmaceutical products (ADVERSE DRUG REACTION'S). WHO has defined ADR's as a response to a drug that is noxious, unintended, and which occurs at doses normally used in man for prophylaxis, diagnosis or therapy of disease or for the modification of a physiological function. Pharmacovigilance plays a consequential role in surveillance of adverse drug reactions, which is provoked by the drugs used to cure diseases. The Thalidomide disaster has been a major reason behind the worldwide significance given towards the study drug responses after its administration in the body. It has been reported through various clinical trials that the number of patients dying because of contrary effects of drugs per year has increased upto 2.6fold. In order to avoid this all the medications targeted for clinical purposes have to undergo several rigorous preclinical and clinical testing as an evidence of their safety and effectiveness. At times, adverse events are seen only upon usage among general population. ADRs can be detected by yellow card reporting, a cost effective method to monitor safe use of drugs. Yellow card reporting is useful in a number of ways. It identifies unidentified ADRs, risk factors for the occurrence of ADRs, drug safety issues and risk benefit comparisons among medications belonging to different therapeutic classes. Thereby Pharmacovigilance has helped into the drug security of the population through various clinical trials of drugs by various economical methods ensuring safety, efficacy and proper therapeutic benefits to an individual.

Keywords: Pharmacovigilance, Adverse Drug Reaction.

PP-PP-29

EBOLA VIRUS DISEASE

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ABSTRACT

Ebola virus disease (EVD), also known as Ebola hemorrhagic fever (EHF) or simply Ebola; is a viral hemorrhagic fever of humans and other primates caused by Ebola viruses. The virus spreads through direct contact with body fluids, such as blood from infected humans or other animals. Spread may also occur from contact with items recently contaminated with bodily fluids. Symptoms usually begin with a sudden influenza-like stage characterized by feeling tired, fever, weakness, decreased appetite, muscular pain, joint pain, headache, and sore throat. In some cases, internal and external bleeding may occur. This typically begins five to seven days after the first symptoms. Recovery may begin between 7 and 14 days after first symptoms. Death, if it occurs, follows typically 6 to 16 days from first symptoms and is often due to low blood pressure from fluid loss. In general, bleeding often indicates a worse outcome, and blood loss may result in death. People are often in a coma near the end of life. No specific treatment is currently approved. The Food and Drug Administration (FDA) advises people to be careful of advertisements making unverified or fraudulent claims of benefits supposedly gained from various anti-Ebola products. Supportive care-rehydration with oral or intravenous fluids and treatment of specific symptoms, improves survival. There is as yet no proven treatment available for EVD. However, a range of potential treatments including blood products, immune therapies and drug therapies are currently being evaluated. The World Health Organization (WHO) recommends avoiding aspirin or ibuprofen for pain management, due to the risk of bleeding associated with these medications. In December 2016, Ebola virus disease was found to be 70–100% prevented by rVSV-ZEBOV vaccine, making it the first proven vaccine against the disease.

Keywords: Ebola, FDA, WHO, Vaccine

PP-PP-30

EVIDENCE BASED UNANI MEDICINE FOR CANCER-SARTAN

(A REVIEW ARTICLE)

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ABSTRACT

Cancer is a global significant health problem with an estimation of 10 million new cases every year throughout the world. In the last 2 decades several anti-cancerous therapies emerged but still success rate remains unsatisfactory hence there is a need of alternative system, i.e. Unani system of medicine. The unani medicine is a holistic medicine which has many unani herbal drugs that has potent tendency to inhibit cancer proliferation, induction of apoptosis, cytotoxicity and immunomodulation. The primary goal of unani medicine is to improve patients quality of life and to reduce the side effects ,

associated with conventional anti cancerous therapies like chemotherapy , radiation etc. when this unani herbal drugs combined with conventional anticancerous therapies may help to synergize the anti cancer effects and to prevent cancer recurrence. However, well designed and well executed and randomized controlled clinical trials are required to validate their usefulness and to make their use acceptable in different types of cancers. This study is based on pre clinical research in vitro and in vivo studies. e.g. Aftimoon (cuscuta reflexa) , Sadabahar (catharanthus roseus) , Afsanteen (artemisia absinthium), etc.

Key words: Cancer, Sartan, chemoprevention, sadabahar, catharanthus roseus. Aftimoon, cuscuta reflexa, Afsanteen, artemisia absinthium.

PP-PP-31

UNANI & MODERN CONCEPT OF PHARMACOVIGILANCE

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ABSTRACT

Pharmacovigilance is an important and integral part of clinical research. Both, safety of clinical trials and post-marketing pharmacovigilance are critical throughout the product lifecycle. Pharmacovigilance is especially important since most of the adverse effects are reversible by modifying the dosage or omitting the offending medicine. In a vast country like India with a population of over 1.5 billion with vast ethnic variations, different disease, Preponderance patterns, practice of different systems of medicines, different socioeconomic status, it is important to have a standardized and robust Pharmacovigilance and drug safety monitoring programme for the nation. Collecting this information in a systematic manner and analyzing the data to reach a meaningful conclusion on the continued use of these medicines is the rationale to institute this program for India. According to WHO, "Pharmacovigilance activities are done to monitor detection, assessment, understanding and prevention of any obnoxious adverse reactions to drugs at therapeutic concentration that is used or is intended to be used to modify or explore physiological system or pathological states for the benefit of recipient." Following qualities of Unani drugs are worth mention. They are economical and nutritious, which is important for economical countries; they are no foreign body and hence match with human body physiology. They have lesser side-effects. However, following steps toward quality control methods for Unani drugs are needed to be taken up: publication of Unani Pharmacopoeias, Formularies, Standardization of Unani Drugs and Traditional Knowledge Digital Library (TKDL).

PP-PP-32

ROLE OF UNANI DRUGS IN THE MANAGEMENT OF SIMAN MUFRIT (OBESITY): A REVIEW

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ABSTRACT

Obesity or SimanMufrit has been known to mankind for about twenty thousand years back. Accumulation of excess Shaham (fat) in the body is termed as SimanMufrit. It is a phlegmatic disorder and person possessing har-ratab (Hot & wet) temperament is prone to this ailment. According to WHO Obesity or Overweight is defined as abnormal or excessive fat accumulation in the body that is a threat to health. World Health Statistics Report said that globally one in six adults is obese and nearly 2.8 million individuals die each year due to overweight or obesity. Obesity is a preventable risk factor for Atherosclerosis, Ischaemic Heart Disease, Hypertension, Diabetes mellitus, Obstructive Sleep Apnoea, Osteoarthritis, Metabolic Syndrome & Fatty Liver. The drugs having Har-Yabis temperament (as obesity has Har-Ratab temperament) and Mufattit (deobstruent), Musakhkhin, Mudir (diuretic), Mulattif (demulcent), Mulayyin (laxative), Daf-e-Shahmeen, Mohazzil (weight reducing) properties are used in the treatment of SimanMufrit. Unani system of medicine has a treasure of medicines which are used for anti-obesity properties such as Marzanjosh, Zanjabeel, Kalonji, Luk-e-Maghsool, RewandChini, Asaroon, Lehsun, Anisoon, Dar Chini, Suddab etc. There are various Clinical and Experimental studies which have been conducted on these single drugs proves their Anti-Obesity property. In this review it is observed that various unani herbo-mineral drugs could be used for the management of obesity and its complications.

Keywords: SimanMufrit, Mohazzil, Anti-Obesity, Luk-e-Maghsool.

PP-PP-33

CONCEPT OF MUQAWWĪ-I BASAR (EYE TONIC) IN UNANI MEDICINE: A REVIEW

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ABSTRACT

In Unani system of medicines, the theory of Muqawwiyāt (Tonics) is unique and important feature while other systems lack this type of concept. Muqawwiyāt (Tonics) are the natural substances that have the ability to improve and maintain the health of the human body or some specific organ of the body when used regularly over a period of time. They tone up the internal organs and improve the body functions. Some of the Muqawwiyāt (Tonics) used for certain specific organs in Unani System of Medicine are Muqawwī-i-A'sāb (nervine tonic), Muqawwī-i-Dimāgh (brain tonic), Muqawwī-i-A'da'Rā'isa (tonic for vital organs), Muqawwiyāt-i-Asnān-o-Litha (tonics for gums and teeth) etc. Du'f al-Basar (asthenopia/amblyopia) is a condition where an impairment of vision occurs, due to strain during reading, watering of eyes and blurring. It is caused by cold and hot impaired temperament either simple or organic. It is also caused by old age due to excess of Rutūbat Fadliyya (waste material) in the body. In Unani system of medicines this condition may be cured by Muqawwī-i Basar (tonic for eye) drugs. There are numbers of single drugs as well as compound formulations mentioned in

classical literature for Du'f al-Basar like Badam (almond), Amla, Badiyan and Zafran etc. Management of Du'f al-Basar may be achieved by using Unani medicines without any side effect. In full length paper an effort will be made to elaborate more detail, importance and uses of Muqawwī-i Basar (tonic for eye) drugs.

Key words: Muqawwī-i Basar (tonic for eye), Muqawwiyāt (Tonics), Unani

PHARMACOGNOSY POSTER

PP-COG-01

CURCUMIN Vs TETRAHYDROCUCUMIN - A COMPARATIVE STUDY

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ABSTRACT

Curcumin (diferuloylmethane), a golden pigment from turmeric, has been linked with antioxidant, anti-inflammatory, anticancer, antiviral, antibacterial, and antidiabetic properties. Most of these activities have been assigned to methoxy, hydroxyl, α,β -unsaturated carbonyl moiety or to diketone groups present in curcumin. One of the major metabolites of curcumin is tetrahydrocurcumin (THC), which lacks α,β -unsaturated carbonyl moiety and is white in color. Whether THC is superior to curcumin on a molecular level is unclear and thus is the focus of this review. Various studies suggest that curcumin is a more potent antioxidant than THC; curcumin (but not THC) can bind and inhibit numerous targets including DNA (cytosine-5)-methyltransferase-1, hemoxygenase-1, Nrf2, β -catenin, cyclooxygenase-2, NF-kappaB, inducible nitric oxide synthase, nitric oxide, amyloid plaques, reactive oxygen species, vascular endothelial growth factor, cyclin D1, glutathione, P300/CBP, 5-lipoxygenase, cytosolic phospholipase A2, prostaglandin E2, inhibitor of NF-kappaB kinase-1, -2, P38MAPK, p-Tau, tumor necrosis factor- α , forkhead box O3a, CRAC; curcumin can inhibit tumor cell growth and suppress cellular entry of viruses such as influenza A virus and hepatitis C virus much more effectively than THC; curcumin affects membrane mobility; and curcumin is also more effective than THC in suppressing phorbol-ester-induced tumor promotion. Other studies, however, suggest that THC is superior to curcumin for induction of GSH peroxidase, glutathione-S-transferase, NADPH: quinone reductase, and quenching of free radicals. Most studies have indicated that THC exhibits higher antioxidant activity, but curcumin exhibits both pro-oxidant and antioxidant properties.

Keywords: curcumin; tetrahydrocurcumin; antioxidant; anti-inflammatory.

PP-COG-02

DIABETIC EFFECT OF MOMORDICA CHARANTIA (BITTER MELON)

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ABSTRACT

Diabetes mellitus is among the most common disorder in developed and developing countries, and the disease is increasing rapidly in most parts of the world. It has been estimated that up to one-third of patients with diabetes mellitus use some form of complementary and alternative medicine. One plant that has received the most attention for its anti-diabetic properties is bitter melon, *Momordicacharantia* (*M. charantia*), commonly referred to as bitter gourd, karela and balsam pear. Its fruit is also used for the treatment of diabetes and related conditions amongst the indigenous populations of Asia, South America, India and East Africa. Abundant pre-clinical studies have documented in the anti-diabetic and hypoglycaemic effects of *M. charantia* through various postulated mechanisms.

KEYWORDS: Momordicacharantia ,Hypoglycaemic agents , Diabetes , Bitter melon .

PP-BOT-3

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Stem cells are undifferentiated, or “blank,” cells. This means they’re capable of developing into cells that serve numerous functions in different parts of the body. All humans start out as one cell (zygote) and then divide to form a human body. This process is known as **differentiation**. Stem cells are cells that haven’t differentiated yet. They have the ability to divide and make an indefinite number of copies of themselves. Stem cells can be divided into main three categories: embryonic, germinal, and somatic. Stem cells have been used in the replenishment of blood and immune systems damaged by the cancer cells or during treatment of cancer by chemotherapy or radiotherapy. Apart from their use in the immune-reconstitution, the stem cells have been reported to contribute in the tissue regeneration and as delivery vehicles in the cancer treatments. This is known as **stem cell therapy**. The recent concept of 'cancer stem cells' has directed scientific communities towards a different wide new area of research field and possible potential future treatment modalities for the cancer. Aim of this review is primarily focus on the recent developments in the use of the stem cells in the cancer treatments, then to discuss the cancer stem cells, now considered as backbone in the development of the cancer; and their role in carcinogenesis and their implications in the development of possible new cancer treatment options in future.

KEYWORDS : Stemcells, Types of stem cells, Stem cell therapy, Cancer stem cells.

ANTI-ADHERENCE ACTIVITY OF POLYHERBAL EXTRACT AND ESSENTIAL OILS AGAINST STREPTOCOCCUS MUTANS

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ABSTRACT

Background: Herbal extracts have been used in dental products for many years owing to their antiadherence effect on oral bacteria in the biofilm formation. Dental caries is developed by the colonization of oral bacteria on the surface of teeth and adherence is the first step in colonization process. **Objective:** The objective of the present study was to explore the anti-adherence effect of the various combinations of herbal extracts and essential oils against *Streptococcus mutans* which plays a central role in the prevention of the dental caries. Four herbs named as *Terminalia chebula* (*T. chebula*), *Psidium guajava* (*P. guajava*), *Azadirachta indica* (*A. indica*) and *Pongamia pinnata* (*P. pinnata*) and two essential oils, clove (*Syzygium aromaticum*) and peppermint oil (*Mentha piperita*) were selected for this study. **Methods:** The selected herbs named as *Terminalia chebula* (*T. chebula*), *Psidium guajava* (*P. guajava*), *Azadirachta indica* (*A. indica*) and *Pongamia pinnata* (*P. pinnata*) were extracted with 50% ethanol and dried. Different combinations of herbal extracts as well as essential oils clove (*Syzygium aromaticum*) and peppermint oil (*Mentha piperita*) were tested for anti adherence potential on glass surface. The number of adhered bacteria (CFU/ml) were determined by plate count method. **Results:** It was found that all extracts combinations and essential oils have shown significant anti-adherence activity. The 2:2:1:1 ratio of extracts and 2:2 of essential oils have shown less bacterial count compared to all other tested ratios. Furthermore the herbal extract ratio of 2:2:1:1 has shown significant anti-adherence activity when compared to standard chlorhexidine mouthwash. **Conclusion:** These findings suggests that the active constituents present in the combined extracts could synergize the anti-adherence activity owing to reinforcement effect of constituents present in the combined mixture.

Keywords

Streptococcus mutans, Anti-adherence activity, herbal extracts, Plate count method, essential oils

ANTIBACTERIAL ACTIVITY OF *OLEA EUROPA*

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Abstract

Antibacterial activity of Petroleum ether, Ethyl acetate and methanol extracts of *Olea europaea* (Oleaceae) was investigated. The extracts were tested against Clinical isolate both Gram-positive, Gram-negative and organisms *Staphylococcus aureus* , *Escherichia coli*, *Enterococcus fecalis* and *Candida albicans*. A doses of 0.5mg/ml and 1.0mg/ml using cup plate method. The extract exhibited broad-spectrum antibacterial activity against the Clinical isolate tested organisms, concentration of the extract shows zone of inhibition 6mm to 14 mm.

Key words: *Olea europaea* , cup plate,

MEDICAL APPLICATIONS OF 3D PRINTING: CURRENT AND PROJECTED USES

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ABSTRACT

Medical applications of 3D printing are expanding rapidly and are expected to revolutionize health care. Medical uses for 3D printing, both actual and potential, can be organised into several broad categories, including: tissue and organ fabrication; creation of customized prosthetics, implants and anatomical models; and pharmaceutical research regarding dosage forms, delivery and discovery. The application of 3D printing in medicine can provide many benefits, including: the customisation and personalisation of medical products, drugs, and equipment, cost-effectiveness, increased productivity, the democratisation of design and manufacturing and enhanced collaboration. However it should be cautioned that despite recent significant and exciting medical advances involving 3D printing, notable scientific and regulatory challenges remain and the most transformative applications for this

technology will need time to evolve. 3D printing technology is rapidly becoming easy and inexpensive enough to be used by consumers. The Charles Hull invented 3D printing which he called “stereolithography” The accessibility of downloadable software from online repositories of 3D printing designs has proliferated, largely due to expanding applications and decreased cost. The type of 3D printer chosen for an application often depends on the materials to be used and how the layers in the finished product are bonded. The three most commonly used 3D printer technologies in medical applications include selective laser sintering (SLS), thermal inkjet (TIJ) printing and fused deposition molding (FDM)

Keywords: 3D printing, product prototype, 3D printers, democratization

PP-COG-07

ANTICANCER DRUGS OF HERBAL ORIGIN

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ABSTRACT

Globally cancer is a disease which severely affects the human population. There is a constant demand for new therapies to treat and prevent this life-threatening disease. Scientific and research interest is drawing its attention towards naturally-derived compounds as they are considered to have less toxic side effects compared to current treatments such as chemotherapy. The Plant Kingdom produces naturally occurring secondary metabolites which are being investigated for their anticancer activities leading to the development of new clinical drugs. With the success of these compounds that have been developed into staple drugs for cancer treatment new technologies are emerging to develop the area further. New technologies include nanoparticles for nano-medicines which aim to enhance anticancer activities of plant-derived drugs by controlling the release of the compound and investigating new methods for administration. This review discusses the demand for naturally-derived compounds from medicinal plants and their properties which make them targets for potential anticancer treatments.

PP-COG-08

INVESTIGATION OF ANTHELMINTIC ACTIVITY OF ACTINOPTERES

RADIATA AGAINST PHERETIMA POSTHUMA AND ASCARDIA GALLI

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ABSTRACT

Development of anthelmintic resistance and high cost of conventional anthelmintic drugs led to the evaluation of medicinal plants as an alternative source of anthelmintic. The present study was undertaken to evaluate anthelmintic activity of aqueous (AQE) and ethanolic (EE) extracts of root of *Actinopteres radiata* against *Pheretima posthuma* and *Ascaridia galli*. Various concentrations (50-100mg/ml) aqueous and methanolic extracts were evaluated for the bioassay involving determination of time of paralysis (P) and time of death (D) of the worms. Piperazine citrate (Std.) was used as standard anthelmintic drug and distilled water was used as control. The results of present study indicated that the methanolic and aqueous extracts significantly exhibited paralysis ($P < 0.01$) in worms in lower doses (25, 50 and 100mg/ml) and also caused death of the worms especially at higher concentration of 100 mg/ml, as compared to standard drug. Further studies are in process to isolate the active principles responsible for the anthelmintic activity.

PP-COG-09

A REVIEW OF BANAFSHA {VIOLA ODORATA LINN} - A SWEET HERB

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ABSTRACT

In the present review on Banafsha {*VIOLA ODORATA LINN*} an effort has been done on medicinal properties. It is commonly known as sweet violet. Banafsha belongs to the violaceae family. It is used in Unani system of medicine by Unani physicians since ancient period to treat number of ailments. Several medicinal properties of Banafsha are present in the root, leaves and flowers. It has a wide range of action on human body such as *Dafeiltihab* (Anti-inflammatory), *DafeHumma* (Antipyretic), *DafeSual* (Anti Tussive) and *Munawwim* (Hypnotic) etc. It has a rich source of Vitamin C. *Viola Odorata* Syrup made from flower petals which act as cough suppressant in children with asthma. In Unani system of medicine Banafsha has been given in the form of Decoction (*Joshanda*) to treat thirst accompanied with fever. Due to effect of its chemical constituents it heals many disorders like jaundice, inflammation, fever etc, and believes that it has immunomodulator, Antipruritic sedative, Hypnotic and Antiseptic Properties.

Keywords: Banafsha, Sweet Violet Immunomodulator, Sedative Antipruritic

PP-COG-10

ZAKHAM-E-HAYAT (KALANCHOE PINNATA) – A EXCELLENT UNANI DRUG FOR WOUND HEALING

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ABSTRACT

Kalanchoepinnata (Linn.) Pers. (synonym: Bryophyllumpinnatum) commonly known as “Miracle leaf” or “Ranakalli” in Tamil belongs to the Crassulaceae family. This plant has high wound-healing properties (hence, the name) and various other medicinal uses were seen. This plant is known to possess a wide variety of activities including antioxidant, antinociceptive, hepatoprotective, antimicrobial, anticancer and anthelmintic properties. It is also used to treat gall stones. It acts as an anti-inflammatory agent and can be used for treating oedema. The presence of the phytochemicals that are the causatives for the above-mentioned activities could be detected and analysed by chromatographic techniques such as thin layer chromatography (TLC), gas chromatography mass spectroscopy (GC-MS) and high-performance thin layer chromatography (HPTLC). Kalanchoe is rich in alkaloids, triterpenes, glycosides, flavonoids, steroids and lipids. The leaves contain a group of chemicals called bufadienolides which are very active and have sparked the interest of scientists. The effect of kalanchoepinnata leaf extract viz. petroleum ether (PE), alcoholic extract (AE), and water extract (WE) on healing, excision, incision and dead space wound in albino rat has been investigated. All the three-extract showed significant increase in the breaking strength of incision wound.

PP-COG-11

PURIFICATION OR DETOXIFICATION OF UNANI DRUGS-A REVIEW

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ABSTRACT

Unani medicine involves the use of drugs obtained from plants, animals, and mineral origin. All the three sources of drugs can be divided under poisonous and non-poisonous category. There are various crude drugs, which generally possess unwanted impurities and toxic substances, which can lead to harmful health problems. The process for purification of unani medicine is known as Tadbeer (detoxification/purification). Tadbeer is the process, which involves the conversion of any poisonous drug into beneficial, non-poisonous /non-toxic ones. Aconitum species, Semecarpus anacardium, Strychnos nux-vomica, Acorus calamus, Abrus precatorius etc., are some of the interesting examples of toxic plants, which are still used in the Indian system of medicine. Aconite, bhilawanols, strychnine, β -asarone, abrin are some of the toxic components present in these plants and are relatively toxic in nature. The present review is designed to extensively discuss and understand the scientific basis of the alternative use of toxic plants as a medicine after their purification process.

Keywords: Tadbeer, detoxification, purification, unani medicine

PP-COG-12

UNANI BOTANICALS USED AS NUTRACEUTICALS: AN OVERVIEW

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ABSTRACT

Nutraceuticals provides health benefits including the prevention and/or treatment of a disease. Hippocrates, Galen, Rhazes, Ibn Zohar, Ibn Sina etc have compiled several books on dietetics. The food and drink is one of the vital factors among the six essential requisites for preservation of life as illustrated in Unani medicine. Presently a new-fangled hot topic in the pharmaceutical industry is 'Nutraceuticals', which is the emergent sector of the natural care industry. It includes dietary supplements (19.5 percent per year) and natural/herbal products (11.6 percent per year). In 2006, The Government of India passed Food Safety and Standard Act to regulate the nutraceutical manufacturing. At present, numerous life style disorders viz. hypertension, diabetes, dyslipidaemia and other diseases viz. anaemia, malnutrition, vitamin deficiency etc can be controlled by selecting suitable nutraceuticals. Commonly unani botanicals used as nutraceuticals includes; garlic, ginger, aloes, senna, brahmi, asafetida, turmeric etc.

Key words: Unani, Herbs, Nutraceuticals

PP-COG-13

THERAPEUTIC POTENTIAL OF AMALTAS (CASSIA FISTULA LINN.) -A REVIEW

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ABSTRACT

Amaltas (Cassia fistula linn.) belongs to family caesalpinaceae, is a popular herbal origin drug used in different traditional system of medicine including unani system of medicine. It is a small or medium sized deciduous tree possesses properties of daf-e-humma (antipyretic), mohallil (anti-inflammatory), mussaf-e-dam (antioxidant), daf-e-ziabitus (antidiabetic), muqawwi-e-jiggarr (hepato protective), daf-e-taffune (antimicrobial), anti-tumor, anti-ulcer. Hence it is used in treatment of diabetes mellitus, hematemesis, leukoderma, pruritus, intestinal disorder, dysentery, leprosy, jaundice, syphilis, and heart disease. This abstract aims to provide a comprehensive review on therapeutic uses of cassia fistula.

Keywords: Cassia fistula, therapeutic uses

PP-COG-14

USTUKHUDDUS (LAVANDULA STOECHAS) – A BRAIN TONIC – A SCIENTIFIC REVIEW

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ABSTRACT

The sources of drugs in Unani system of medicine are plant origin, animal origin and mineral origin and it is known as Tri matter theory. Among these, the plants are the main source of drugs. In pharmaceutical world, Unani Medicine has a special place for its good Pharmacological actions and therapeutic uses. Ustukhuddus (Lavandula stoechas) of Lamiaceae family is an aromatic plant, in Unani medicine whole plant is used as drug. Various pharmacological actions of Ustukhuddus has been described in Unani literature such as Nervine tonic (muqavi-e-Asab), Nervine Stimulant (Muharik-e-Asab), Brain tonic (Muqavi-e-Dimagh) Brain sweeper (Jarob-e-Dimagh), Anti Convulsant (Dafe-e - Tashanuj) and demulcent (Mulatif). It provides strength to the brain and expels the impurities from the brain and clarifies the intellect. Therapeutically, it has been used in the Brain and Nervine disorders like Epilepsy, Dementia, Tremors, Paralysis, Bells palsy and Sinusitis, etc. The various studies on Lavandula stoechas confirms that it contains organic substances such as Glycosides, Resins, Carbohydrates and essential oil contains about 30%-40% esters, calculated as linalyl acetate, linalool, pinene, geraniol, cineol and also it contains the Inorganic substances such as Aluminum, Calcium, Iron, Magnesium and Potassium. The Lavender oil has neuro-protective activity against cerebral ischemia and also used as sedative. Ustukhuddus is prescribed by some hakeem (medieval physicians) as Ebn-e-sina and Razi for treatment of epilepsy and migraine attacks.

Key Words: Herbal drug, Tri-matter theory, Ustukhuddus, Lavandula stoechas, Jarob-e-Dimagh, Brain tonic.

PP-COG-15

MEDICINAL PROPERTIES OF PORTULACA OLERACEA LINN. (KHURFAH) IN UNANI SYSTEM OF MEDICINE

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ABSTRACT

The Unani system of medicine is originated in Greece and being practiced in large part of our country since centuries ago. Portulaca oleracea Linn is a one of the important medicinal plant which belongs to Portulacaceae family and found in India and Pakistan. According to renowned unani physicians Portulaca oleracea Linn is widely used in Unani system of medicine. It is commonly known as Khurfah, common purslane. The medicinal properties of this drug reported are Refrigerant (Mubarrid), Diuretic

(Mudirr-e-Baul), Anti-diabetic (Dafi-e-Ziabetes), Stomachic (Muqawwi-e-Meda) and Intestinal tonic (Muqawwi-e-Am#39;aa) etc. in view of Unaniliteratures. It contains also some alkaloids i.e. oleraceins. Key words: Tukhm-e-Khurfah, Portulacaoleracea, common purslane, Unani medicine.

PP-COG-16

KAFOOR (CINNAMOMUM CAMPHORA L.): A HERBAL ORIGIN DRUG

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ABSTRACT

Herbal Medicines have leading role as the major remedy in Traditional System of Medicine being used since antiquity. Today estimate that about 80% of people still rely on Traditional Medicine for primary health care. Herbal medicines are currently in demand and their popularity is increasing day by day. Kafoor is one of the most potent medicines, which is derived from the wood of the camphor laurel (*Cinnamomum camphora* L.) trees through steam distillation and purification by sublimation. It is used as Muarriq (diaphoretic), Muharriq-e-qalb (cardiac stimulant), daaf-e-tashannuj (antispasmodic), Munaffis-e-Balgham (expectorant), Munawwim (sedative), Musakkir (narcotic), Daaf-e-taffun (antiseptic), Musakkin-e-alam (analgesic), Maan-e-hamal (contraceptive), Mubhi (aphrodisiac). It is used as a liniment in joints and muscle pain, balm in skin diseases, and as an inhalant for bronchial congestion. This review has concluded that kafoor is a potent herbal origin drug could be used for pre-clinical and clinical studies.