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ORAL PRESENTATION

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TPV16/OP/001

HYPOLIPIDEMIC EFFECT OF ALCOHOLIC EXTRACT OF ALPINIA CALCARATA ROSC RHIZOMES IN EXPERIMENTAL ANIMALS

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ABSTRACT

Alpinia calcarata rosc (zingiberaceae) have been used to treat various diseases in indigenous system of medicine. In the present study, an attempt was made to evaluate hypolipidemic effect of alpinia calcarata rosc was carried out. The alcoholic extract (100, 200 and 400 mg / kg p.o) of alpinia calcarata rosc, rhizomes produced a significant reduction of total cholesterol, triglycerides, low density lipoprotein, very low density lipoprotein, and increase in high density lipoprotein which shows potent hypolipidemic activities in animal models. Moreover treatment with alcoholic extract prevented the accumulation of cholesterol in aorta, liver, and kidney was examined by histopathological studies.

Key words: Alpiniacalcarata, zingiberaceae, hypolipidemic activity.

TPV16/OP/002

STUDY OF ANTIOXIDANT AND ANTIMICROBIAL ACTIVITY OF DRIED LEAVES OF CANTHIUM DICOCCUM

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ABSTRACT

Canthium dicoccum(rubiaceae) is one of the traditional medicinal plant which is used for treatment of various ailments. In the present study, an attempt was made to evaluate anti-oxidant and anti-microbial properties of Canthium dicoccum. The invitro anti-oxidant of alcoholic extract shows the anti-oxidant property and free radical scavenging in a dose dependent manner which is measured by 1,1 diphenyl picryl hydrazyl (DPPH) assay method. The invitro anti-microbial activity of dose 2000mg posses inhibitory action against various fungi and bacteria. Hence it can be recommended for anti-oxidant and anti-microbial effects.

KEY WORDS: Canthium dicoccum, Rubiaceae, Anti-Oxidant, Anti-Microbial

TPV16/OP/003

IDENTIFICATION OF BIOACTIVE COMPOUND BY HPLC FROM THE FRACTION OF PLANT MERREMIA EMARGINATA (Burm.f.).

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ABSTRACT

Natural products, such as plants extract, either as pure compounds or as standardized extracts, provide unlimited opportunities for new drug discoveries because of the unmatched availability of chemical diversity. Botanicals and herbal preparations for medicinal usage contain various types of bioactive compounds. The aim of the study was to find out the bioactive compound from the plant Merremia emarginata by HPLC studies. The Plant was extracted with ethanol solvent by hot percolation method and the extract was subjected for column chromatography. The column chromatography resulted to give more fractions which was separated and confirmed by TLC studies. Then collected bioactive fraction was analyzed for HPLC studies with standard Markers. The results showed the presence of Quercetin and chlorogenic acid bioactive compound by HPLC studies. This compound might responsible for pharmacological activity which can be confirmed by further studies.

Keywords: Merremia emarginata, Quercitin, Chlorogenic acid, HPLC.

TPV16/OP/004

SYNTHETIC NOVEL FLAVANOID DERIVATIVES ACT AS POTENTIAL CYTOTOXIC AGENT AGAINST HUMAN SMALL CELL LUNG - SHP-77 CELL LINE AND HUMAN COLON CANCER CELL LINE (HCCL) - COLO-205

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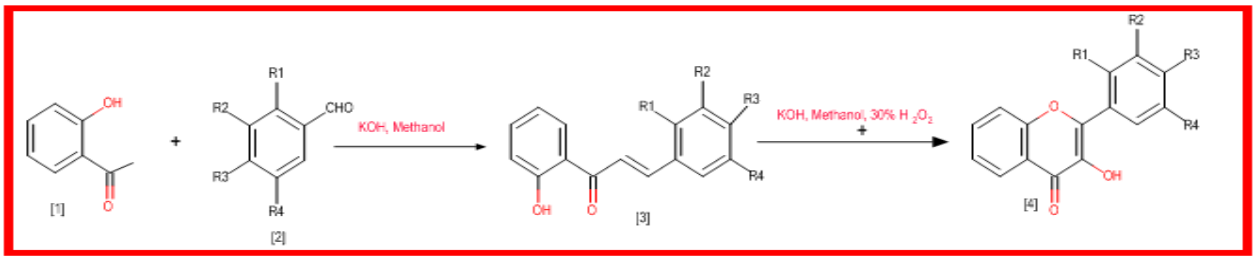
ABSTRACT

The objective of the present research work was the synthesis of 2- (2, 3, 4, & 5 substituted phenyl) 3-hydroxy-4H-Chromen-4-one and evaluation of in-vitro cytotoxic activity. Based on this a new series of compound had been planned to synthesize by reacting 2-hydroxy acetophenone and various aromatic aldehydes in the presence of potassium hydroxide, methanol and 30% hydrogen peroxide. The synthesized compounds were characterized by IR, NMR, and Mass spectroscopy. The in-vitro cytotoxic activities were carried out against SHP-77 cell line and COLO-205 cell line and MTT assay was used to analyze the cell growth inhibition of the both. The results had been showed that compound 4A, 4B, 4C, 4D, 4E and 4J were possessed an excellent cytotoxic activity (at 20 µg/ml) against both SHP-77 cell lineand COLO-205 cell line, where asthe compound 4H had shown good cytotoxic activity against only COLO-205 cell line and doxorubicin (at 10µg/ml) was used as a standard drug for SHP-77 cell line and 5-Fluro uracil (5-FU) for COLO-205 cell line . The IC_{50} values for the synthesized compounds were found to be 4A (IC_{50} of4.10 µg/ml), 4B (IC_{50} of 3.4 µg/ml), 4C (IC_{50} of 3.2 µg/ml), 4D (IC_{50} of 3.1 µg/ml), 4E (IC_{50} of 3.9 µg/ml) and 4J (IC_{50} of 2.8 µg/ml) against SHP-77 cell lineand 4A (IC_{50} of 3.6 µg/ml), 4B (IC_{50} of 3.5 µg/ml), 4C (IC_{50} of 3.3 µg/ml), 4D (IC_{50} of 2.9 µg/ml), 4E (IC_{50} of 3.6 µg/ml), 4H (IC_{50} of 4.00 µg/ml) and 4J (IC_{50} of 2.4 µg/ml) against COLO-205. The IC_{50} values of standard drugs doxorubicin and 5-FU were found to be 1.399 µg/ml and 1.198 µg/ml.

Key words: IR, NMR, Mass, SHP-77, COLO-205, MTT, $1C_{50}$ etc.



TPV16/OP/005

SCREENING ETHANOLIC EXTRACT OF Ficus glomerata FOR ANTIPYRETIC ACTIVITY

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ABSTRACT

The objective of this study was to determine the antipyretic activity of ethanolic extracts of Ficus glomerata. This plant also possesses carminative and antidiabetic property. The leaves were washed, cleaned properly to remove foreign material by using water, dried in shade for 15-20 days, pulverized to coarse powder. Ethanolic extract was prepared using soxhlet apparatus (95% ethanol). The antipyretic activity was measured using yeast induced fever test. Hyperthermia was induced in wistar rats by subcutaneous injection of 20% suspension of yeast (10mL/kg). After 16 hours the leaf extract of Ficus glomerata was administered and the rectal temperature was measured before yeast injection, just before and after 1, 2,3 hours of dosing. On examination, a significant decrease in temperature was observed after 3 hours of the extract administration. The overall study indicates that the plant is of importance due to its significant antipyretic activity and hence is suitable for further investigation.

KEYWORDS: Ficus glomerata, antipyretic effects, wistar rats.

TPV16/OP/006

PHYTO COMPONENTS SCREENING OF ETHANOLIC EXTRACT OF MOMORDICA CHARANTIA VAR MURICATA

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ABSTRACT

INTRODUCTION:Momordica charantia L. commonly known as bitter gourd is an economically important medicinal plant belonging to the family cucurbitaceae. Two varieties M.charantia var. charatia with large fruits which are fusiform in shape and M. charantia var.muricata, identified as small, round fruit, are cultivated in India. The immature fruits are eaten as vegetables and are good sources of vitamin C, vitamin A and phosphorus and iron. The fruits of Momordica charantia have been used as folklore medicine for the management of ailments such as leprosy, menstrual problems, hypertension and most efficiently for diabetes. AIM: The present investigation was carried out to identify active components available in small round variety of immature fruit M. chrantia muricata. METHODOLOGY: The fruits were procured directly from the garden at Bhuvanagiri, Tamilnadu, were washed in tap water and cut into small pieces and were shade dried for 10 days. The dried fruits were ground into fine powder. The sample was extracted with ethanol and analyzed through Gas Chromatography – Mass spectrometry for identification of different compounds. RESULTS: Analysis reveals presence of 25 phyto components. The major compound present in the ethanolic fruit extracted as identified by GC – MS was β-Sitosterol with RT 37.26 and 12.16% relative peak area. This compound has anti hyperlipoproteinaemic, antibacterial and antimicotic activity, and has been shown to act as inhibitor of tumor promotion in vivo and to inhibit carcinogenesis. Thus M.charantia is pharmaceutically important as it has various bioactive compounds and providing health benefits, in decreasing risk of CVD, prevention of cancer, diabetes mellitus and in enhancing immune system.

Key words: GC-MS analysis, Momordica charantia var muricata, phyto components.

TPV16/OP/007

AN INDICATION OF GENOTOXINS IN NATIONAL ESSENTIAL DRUGS -NEED OF IMPROVEMENTS IN DRUG DISCOVERY

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ABSTRACT

Genotoxin generally a chemical substance which damages DNA. If those genotoxin causes mutations in DNA it called mutagen, Moreover some substances may act as a carcinogen teratogen. These substances when it present in the active pharmaceutical ingredients commonly called as Impurities. Follow by the evidence based studies categorize the impurities in to Genotoxin or non genotoxic literature The identified impurities are prescribed in monograph , the list of prescribed impurities also varies among the different monograph books. The reasons for those variatios are undesirable. The regulatory bodies frequently meets challanges to to explain the reasons for those variations. The aim of present work to perform the evidence base review on the three essential drugs namely phenytoin, warfarin and Nicergoline under the category of Anti epilepsy, anti coagulant and anti hypertensive respectively. The mutagenic capability evaluate for their reported impurities for their mutatation character. The three impurities were been optted based on structural alerts principle and their safety issues were evaluated by AMES and nicking model. The study proved that the out of three impurities two produced confirm mutation effect and nicking effect in DNA. The Study reveals that, all the impurities safety profile should be questioned to confirms its bio-safety, however the impurities should be examined and classify with safety evidence.

TPV16/OP/008

ANALYTICAL METHOD DEVELOPMENT AND VALIDATION OF RP-HPLC METHOD FOR SIMULTANEOUS ESTIMATION OF ATENOLOL AND LOSARTAN IN BULK AND PHARMACEUTICAL DOSAGE FORMS

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ABSTRACT

A simple, rapid, sensitive and economical reverse phase HPLC method has been developed for the simultaneous estimation of Atenolol and Losartan in bulk and pharmaceutical dosage forms. The column used in determination was Symmetry C18 (4.6mmx150mm, 5µm, Make: Waters), mobile phase comprising of 0.2M Phosphate buffer (pH 2.5): methanol: acetonitrile (30:20:50) with ambient column temperature. The chromatographic analysis has been carried out using flow rate of 1.0ml/min and the detection wavelength was set at 234 nm. The retention time was about 2.159 min for Atenolol and 3.716 min for Losartan of a total run time of 10 minutes. The correlation coefficient was found to be 0.999 for both the drugs. The method was validated as per ICH guidelines in terms of linearity, accuracy, specificity, precision, robustness, limit of detection and limit of quantification. The results of recovery studies were in good agreement with the respective label claim of the formulation so used for routine determination. Thus, the developed method can be applied in the field of bioequivalence and pharmacokinetic studies for the simultaneous estimation of Atenolol and Losartan in bulk and pharmaceutical dosage forms.

Keywords: RP-HPLC, Atenolol, Losartan, ICH, Analytical method validation.

TPV16/OP/009

FORMULATION DEVELOPMENT AND EVALUATION OF ORAL DISINTEGRATING PELLETS OF ONDANSETRON HCl BY USING EXTRUSION AND SPHERONIZATION

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ABSTRACT

Ondansetron HCl is a serotonin receptor (5-HT_3) antagonist used in the prevention of chemotherapy induced nausea and vomiting. The primary objective of this study is the formulation development of ODP drug delivery system to produce palatable pellets that disintegrate in a few seconds. The bitterness of Ondansetron HCl is masked by saccharin sodium and the disintegration time is reduced by using disintegrants. The above mixture is mixed in a blender for 10 minutes with CS, MCC and lactose. Then mixed with water in a ratio of 60 gm of water for 400 gm of powder continuously for 20 minutes until a damp mass with suitable consistency obtained. The wet mass is then passed through a single screw extruder with a 1.0 mm screen at 150 rpm. The extrudates were processed in a spheronizer fitted with a cross hatched plate rotated at 300 rpm for about 5 minutes. The obtained pellets were dried at 40^0C for 30 minutes and stored in desiccator. All formulations were evaluated for disintegration time, wetting time, weight variation, percentage friability and in-vitro dissolution studies. Formulation F_5 showed disintegration time of 48 sec, wetting time of 3.3 sec, sodium starch glycolate which also shows good sweet taste. In-vitro dissolution studies of formulation F_5 showed more than 98% drug release within 90 minutes. It was concluded that fast disintegrating Ondansetron HCl pellets were successfully prepared with enhanced disintegration/ or dissolution of the drug. Further in-vivo study has to be performed to prove the efficacy of the formulations.

Keywords: Orally disintegrating tablet, in-vitro disintegration time, wetting time, Ondansetron HCL.

TPV16/OP/010

ANALYSIS OF DRUG RELATED PROBLEMS IN PAEDIATRIC INPATIENT IN A TERTIARY CARE TEACHING HOSPITAL, RMMCH

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ABSTRACT

Background:

Paediatric patient is more chance of diseases due there physiological factors they were more prone to drug related problem which can produce negative effect in desire therapeutic output.Objective: To analyze of drug related problems in paediatric inpatient and it's managementMaterial method:Prospective interventional study, All the patients admitted in paediatric ward in RMMCH during in 4 month study period January to april 2016 who has compliance with inclusion and exclusion criteria. Results:Out of 104 patients case sheet ward reviewed during the study period in which 65 drug related problem identified were occurred mainly in males (63.0%).Most of drug related problem was drug interaction (30.769%) followed by over dosage(20.%) and then adverse drug reaction (13.84%) .These drug related problems found can either be preventable or can easily managed. Pharmacist intervention were of changing dosing (33.84%) followed by both changing the frequency o administration (13.84%), cessation of drug (13.85%) and then comes the addition of drugs(10.77%).Conclusion:Pharmacists have significant role identification and monitoring of drug related problem which leads to potential impact on the outcome of the therapy.

Key words: drug related problem, intervention, paediatrics

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TPV16/OP/011

NEAT MULTICOMPONENT ASSEMBLY, IN SILICO- IN VITRO EVALUATION FOR ANTI - OXIDANT AND ANTI - CANCER ACTIVITY OF NOVEL SUBSTITUTED ACENAPHTHYLENE PYRROLIDINES.

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ABSTRACT

Acenaphtho-based heterocyclic compounds, particularly acenaphthylene pyrrolidines have been identified as potent anti-tumour leads. Although a surplus of synthetic methods are available for the construction of fused pyrroles, their synthesis still remains challenging because most of the methods require multiple steps or harsher conditions. Moreover the synthesis of highly functionalized fused pyrroles through multicomponent reactions employing amines and activated alkynes have been less investigated. Oxidative stress is one of the major causes of increased risk of cancer and cardiovascular disease.More research is needed to improve our understandings of the positive effect of antioxidants and cancer. The aim was to develop green, catalyst free strategy leading to functionalized ten analogues of acenaphtho-fused pyrroles (VAZN1-VAZN10) utilizing eco-friendly amines and activated alkynes, to prove their efficacy as better anti-oxidant by DPPH scavenging assay, to generate potential lead molecules by in silico docking against thymidylate synthase (colon cancer) &P-glycoprotein (breast cancer) targets with acceptable efficacy in terms of binding energy and inhibitor activity and to subject potent leads to explore for anti-cancer profile by in vitro MTT assays in HT-29(colon cancer) and MCF-7(breast cancer) cell lines.The chemical reaction afforded products in the range 80-92% yield. Among the ten compounds tested, VAZN1, VAZN4, VAZN6, VAZN7, VAZN9 & VAZN10were effective based on hydrogen bond energy and score and VAZN1 and VAZN10 have shown maximum scavenging activity with IC_{50} 178.90& 250µg/ml respectively and VAZN6 and VAZN10 exhibited potent inhibition with IC_{50}at 21.3, 20.0 and 23.6, 10.3 µM ininvitro cytotoxicity against two tumour cells HT-29 and MCF-7 respectively by 24 h drug exposure MTT assay. Based on these findings, the study is further planned to explore anti-cancer mechanism for the compound VAZN10 with a greater hope that the results may provide a novel candidate for pre-clinical toxicological and efficacy studies for cancer ailment.

TPV16/OP/012

EVALUATION OF SUB-ACUTE TOXICITY (ORAL) STUDY OF ETHANOLIC EXTRACT OF Merremia emarginata IN WISTAR ALBINO RATS

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ABSTRACT

The aim of this study was to evaluate the sub acute oral toxicity of extract of Merremia emarginata in wistar albino rats. The ethanolic extract of Merremia emarginata was prepared by hot percolation method and subjected for sub-acute toxicity study after getting IAEC clearance. The alcoholic extract of ME at a dose of 400 mg/kg b.w p.o was administered for 28 days. The changes in body weight, food and water intake were observed for the entire study. No significant decrease in body weight was observed. The alcoholic extracts of ME treated rats did not show any significant changes in hematological parameters and histopathological examinations when compared with normal control animal. The sub acute toxicity (OECD 407) study showed the safety profile of this plant and further pharmacological activity can be performed for this plant.

Keywords: Merremia emarginata, Sub acute toxicity, wistar albino rats,OECD 407

TPV16/OP/013

ASSESSMENT OF DRUG REALED PROBLEMS IN CARDIOVASCULAR DISEASE PATIENTS

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ABSTRACT

Objective: The main objective of the study is to estimate the demographic details of patients with cardiovascular disease and to estimate the prevalence and various perspectives on drug related problems.Methods: This is a prospective observational study, the study was conducted for a period of six months (Nov 2015– April 2016) and the information was collected from inpatients case sheets, diagnosed in RMMCH Annamalai Nagar Chidambaram. In case if any drug related problem was identified, was discussed with the concerned physician and suitable interventions was provided and documented and the data were analysed using Microsoft excel.
Results: Among 102 patient, a total of 308 numbers of DRPs were identified, average of 3 DRP for each patients. The most common drug related problem was found to be the presence new indication of drug treatment (60.7%), followed by untreated indication (50.98%), and dose to low (40.20%), dose to high (4.90%).Almost half of the patients receiving un-necessary treatment, and one by fourth of patients facing adverse drug reaction and 95 major interaction were found. Other DRP were identified includes no indication for drug (35%), no effect on drug therapy (5.88%) and prescribed drug not available (6.8%). Conclusion: The pharmacists could identify some drug related problems, prompt and proper intervention will helps in achieving better patient care that can lead to improve the quality of care and drug therapy.

TPV16/OP/014

FABRICATION AND CHARATCTERIZATION OF NOVEL OCULAR NIOSOMAL INSITU GEL FOR EFFECTIVE TREATMENT OF GLAUCOMA

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ABSTRACT

The design of the present study was to investigate the feasibility of using non ionic surfactants vesicles (Niosomes) as carriers for the ophthalmic delivery in the treatment of glaucoma. Niosomal formulations were developed using various surfactants series of span 20,40,60,80 in presence of cholesterol and charge inducer like diacetyl phosphate in different molar ratios by using thin film hydration technique. The niosomal formulation showing highest drug entrapment efficiency proved prolonged drug release pattern. Optical microscopy, transmission electron microscopy and Scanning electron micrsocopy analysis exhibited the size and shape of niosomal vesicles of about 50-100 nm. The optimized niosomal formulation was further developed in to niosomal insitu gel preparation using HPMC & carbopol as gel forming polymers. Gelation time, Rheological studies, invitro release studies, exvivo studies were studied for the developed insitu gel formulation which showed sustained release pattern with improved corneal permeation and bioavailability.

Key words: Niosomes, ophthalmic, Non ionic surfactants, thin film hydration, entrapment efficiency, corneal permeation

TPV16/OP/015

CYTOTOXIC AND BIOACTIVE FRACTION FROM SPIRASTRELLA PACHYSPIRA AGAINST HER2 POSITIVE CANCER CELL LINE

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ABSTRACT

Marine sponges, sessile organisms are storehouses of many bioactive lead compounds. Spirastrella a boring sponge detrimental to the coral reef is a rich source of many potent cytotoxic compounds like helinane terpenoids, spirastrelloides, spongistatins, mollenyne and sphingosine. In the present scenario breast cancer is the first prevalent common cancer in the world and the risk of recurrence with HER2-positive tumor a subtype of breast cancer is significantly higher than with HER2-negative tumors.The sponges collected from Poomarichan island of Gulf of Mannar were identified, authenticated and stored as a specimen in Zoological survey of India. The sponges were thawed and extracted with solvents of increasing polarity. The preliminary analysis was carried out to screen the fraction obtained from the hexane extract of Spirastrella pachyspira. The extracts were tested for its inhibition of cell growth against SKBR3 cell line a HER2-positive receptor cell line over a concentration range (10ng-10^7ng). The assay was performed in vitro on exponentially growing cells. The activity was evaluated by measuring the levels of surviving cell after incubation for 24 hours with the extracts using the MTT colorimetric assay. In the current study the ethyl acetate extract of Spirastrella pachyspira showed a significant antiproliferative activity against SKBR3 cell line. The 50% inhibition of cell growth was obtained at a concentration of 0.04µg for the ethyl acetate extract. The study envisaged that the ethyl acetate extract can be a potent source for a lead anticancer agent from the marine source.

TPV16/OP/016

ANTI-DIABETIC ACTIVITY OF Syzygium cumini AND ITS ISOLATED COMPOUND AGAINST STREPTOZOTOCIN-INDUCED DIABETIC RATS

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ABSTRACT

Syzygium cumini (Myrtaceae) is widely used traditional system of medicine to treat diabetes in India. The present study was carried out to isolate and identify the putative anti-diabetic compound from the S. cumini (SC) seed. A compound, mycaminose was isolated from the SC seed extract. The isolated compound mycaminose (50 mg/kg) and ethyl acetate (EA) and methanol (ME) extracted compounds of S.cumini seed (200 and 400 mg/kg) was undertaken to evaluate the anti-diabetic activity against streptozotocin (STZ)-induced diabetic rats. The compound 'Mycaminose' and ethyl acetate and methanol extracted produced significant ($p<0.05$) reduction in blood glucose level. The standard drug glibenclamide (1.25 mg/kg) also produced significant ($p<0.05$) reduction in blood glucose level against STZ-induced diabetic rats. The results of this experimental study indicate that isolated compound 'Mycaminose', ethyl acetate and methanol extracts possess anti-diabetic effects against STZ-induced diabetic rats.

KEYWORDS: Syzygium cumini, ethyl acetate, methanol, mycaminose, anti-diabetic.

TPV16/OP/017

SCREENING OF ANTIBACTERIAL AND ANTIOXIDANT ACTIVITY OF NEWLY ISOLATED STRAINS FORM SAPROPHYTIC SOIL SAMPLES

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ABSTRACT

Most of the antibiotics used today are from the microbes. Bacillus and actinomycetes is the most abundant microorganism present in and both are known to produce antibiotics. However, there are other potential microorganisms which have such beneficial properties and are unknown to us. In this work aim to study, the antibiotics from newly isolated strains S2A, S2B, S2C, and S3A obtained by Crowed Plate technique of saprophytic soil. The isolates were used to perform antibactieral activity by Agar-Well Diffusion method using Klebsiella pneumonia2957, Bacillus substilis2717, Escherichia coli2810, Pseudomonas aeruginosa2957 and Staphylococcus aureus5081. The S2C isolates having better zone of inhibition when compared to others, were selected for further studies. The S2C were grown in production medium at different pH (6.5, 7.0, and 7.5) then down streamed by extraction of protein using Ultrasonic Assisted Extraction method then, salting out method. The samples were purified by dialysis method. The results were analyzed by statistically, S2C strain producing potent antibiotics. These antibiotic activities do not alter while changing the pH of the production culture medium as well as increase the ammonium sulphate concentration increase the separation of antibiotics. The purified proteins were further purified by SDS-PAGE and found Minimum inhibitory concentration. The antibiotic was screened for its potential anti-oxidant activities using tests such as DPPH radical activity and H_2O_2 radical scavenging activity. The isolated strain was genetically identified on the basis of 16S rRNA gene sequencing.

Key Words: Antibacterial activity, SDS-PAGE, Ultrasonic assisted Extraction.

TPV16/OP/018

A COMPARATIVE ANTIMICROBIAL EVALUATION OF WOUND HEALING SIDDHA DRUGS, MATHAN THAILAM, PUNGA THAILAM, CHIRATTAI THAILAM AND SIVANARVEMBU KUZHI THAILAM.

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ABSTRACT

The antimicrobial activity of the four wound healing Siddha drugs viz. Mathan Thailam, Punga thailam, Chirattai thailam and Sivanarvembu Kuzhi thailam were assayed by the agar plate disc diffusion, well diffusion, pour plate, direct drop and nutrient broth dilution techniques. Test microorganisms were Staphylococcus aureus, Enterococcus faecalis, Pseudomonas aeruginosa, Escherichia coli, Klebsiella pneumoniae and Acinetobacter baumannii; all the organisms were laboratory isolates from pus samples. The drugs showed significant inhibited growth of all the test organisms especially against S. aureus. This study has justified the traditional use of these drugs for the treatment for wound healing. Among the four drugs Mathan thailam showed more activity.

Key words: Antimicrobial, Siddha drugs, wound infection, Mathan Thailam, Punga thailam, Chirattai thailam and Sivanarvembu Kuzhi thailam

TPV16/OP/019

EFFECT OF DIHYDROXY FLAVONES ON MORPHINE TOLERANCE

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ABSTRACT

Morphine and related opioid analgesics remain the mainstay of management of pain repeated daily administration especially in chronic pain situations like cancer can invariably decreases the analgesic effect due to development of tolerance. This remains a limiting factor and great impediment to the treatment of pain in many chronic painful situations. The present study investigated the effect of four dihydroxy flavone compounds 5, 3'-dihyroxy flavone and 7,3' –dihydroxy flavones on the development of tolerance to morphine antinociception in mice. The dihydroxy flavones used in this study were synthesized by adopting standard procedure at the Research Organics, Chennai. Melting point, Thin layer chromatography, U.V spectra and I.R spectra of the synthesized compound were compared with the standard samples and were found to be similar. Male swiss albino mice (25-30g) were housed at animal house Sri Ramachandra University, Institutional animal ethical commitee permission was obtained prior to study. Dihydroxy flavone derivatives were prepared as a uniform suspension in 1% carboxy methyl cellulose and injected by the subcutaneous route at a dose of 50mg/kg. Both acute (three injections at four hour intervals) and chronic (five days treatment) tolerance study were conducted using the acetic acid induced abdominal constriction assay for the both dihydroxy flavones. The results of the experiment of the acute and chronic tolerance reveals that the antinociceptive activity of 5, 3'-dihyroxy flavone and 7,3' –dihydroxy flavone were not altered after repeated administration either in the acute or the chronic study.

Key words: Dihydroxy flavones, morphine tolerance, anti-nociception.

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TPV16/OP/020

A STUDY ON LOW FAT AND LOW SUGAR ICE CREAM

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ABSTRACT

Introduction: Ice cream has been one of the most favourite desserts of people of all age. "A study on low fat and low sugar ice cream" substituting milk with skim milk and sugar with stevia, jaggery and honey was conducted in Puducherry. Methodology: Four samples of ice creams each with skimmed milk & stevia, honey, jaggery , sugar were chosen. Organoleptic sensory evaluation with 5 point hedonic scale was chosen as a tool and was evaluated by 30 Chefs of reputed food institution. Nutritional value was also assessed. Objectives: 1.To assess sensory evaluation of ice creams. 2. To assess the nutritional content of the ice creams. Results: From the above study it was found that the ice cream made of natural sugar had high calories 84.03. In all the four ice creams fat was of the same value (2.19).as all the ice cream was made up of skimmed milk. The carbs found in these ice creams state that the highest carbs were in sugar ice cream(12.8). It was also found that highest levels of iron was found in jiggery ice cream (0.308) . the results of sensory evaluation such as physical appearance, texture, mouth feel, aroma & taste, overall quality showed honey ice cream had better scores. Conclusion: Jaggery ice cream was nutritionally better and honey ice cream had higher organoleptic values.Suggestion: Low fat and low sugar ice cream was found acceptable which may be beneficial for the people who suffering from diabetic, obesity & hypertension.

TPV16/OP/021

SAY NO TO PILLS - GO NATURAL

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ABSTRACT

INTRODUCTION: Modern world prescribes a wide lot of pills. Pills to protect, pills to grow, pills to cure, pills to relax, pills to nourish, pills to cosmetize.METHODOLOGY: About 50 households were questioned to study their intake of pills their frequency and needs. OBJECTIVE: To identify the type of pills commonly used their frequency and need to use. RESULTS: 64 percent of samples state they use pills often, among them 70 percent use pain killers, 32 percent use nutri pills, 59 percent use pills for metabolic disorders. Among the 64 percent who use pills 80 percent use them weekly and 20 percent use them when necessary. It is very obvious to note that only 38 percent of the samples used home remedies as alternate therapy to treat problems. Among them 18 percent used barks of cinnamon for severe migrane, 12 percent used tulsi decotion for cold and phlegm, 38 percent used herbal treatments. CONCLUSION: Pills are made of chemicals and a large exposure to them at a large frequency would in due course damage the body causing side effects. Simple health problems could be treated with home remedies and herbs. Higher usage of pills even for ordinary problems is dangerous.

TPV16/OP/022

GC-MS ANALYSIS OF AAVARAI KUDINEER FORMULATION (AKF) - AN OFFICIAL SIDDHA POLYHERBAL FORMULATION FOR DIABETES MELLITUS

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ABSTRACT

The in-house prepared formulation of AKF was extracted with ethanol and analyzed through GC-MS for identification of different compounds. GC-MS analysis was carried out using Perkin Elmer GC Clarus 500. Helium was used as carrier gas at a constant flow of 1ml/min and an injection volume of 2µl was employed. The oven temperature was programmed from 50^0C for 2 min, inversed to 150^0 C at 8^0 C/min and to 240^0 C at 8^0 C/min, and held at 270^0 C for 20min. Mass spectra were obtained at 70eV. The Total Ion Chromatogram (TIC) was created by summing up intensities of all mass spectral peaks. The TIC was compared with GC chromatogram. Turbo Mass Version 5.2.0 Software was adopted to handle mass spectra and chromatograms. The compounds were identified by interpretation of the spectrum of the unknown compounds with the spectrum of the known compounds mentioned in The National Institute of Standard and Technology (NIST) library database. A total of 12 compounds were detected through library matching of which α-D-Glucopyranose 4-O-β-D-galactopyranosyl and 9,12-Octadecadienoic acid (Z,Z) are showing highest peak area. The other ten compounds are cyclopentane undecanoic acid, methyl ester, Lactose, D-Glucose, 4-O-α-D-glucopyranosyl, Phytol, Tetradecanoic acid, 11,14,17-Eicosatrienoic acid methyl ester, E-7-Tetradecenol, 10-Undecen-1-ol, 1, 2-benzenedicarboxylic acid diisooctyl ester and Squalene.

Keywords: Aavarai Kudineer Formulation (AKF), GC-MS study.

TPV16/OP/023

STUDY ON POTENTIALITY OF SIDDHA HERBALISM IN THE MANAGEMENT OF NEPHROTOXICITY AND UROLITHIASIS

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ABSTRACT

Medicinal plants play a vital role in the healthcare system in India. They are well known for the non-toxicity, low cost and importantly less or no side effects. Siddha medicine, originated in south India and it is an indigenous medical system of our Indian nation. It has wide range of therapeutic formulations having the medicinal plants as chief ingredients. Renal disorders are one among the common health problem that mankind faces frequently. Nephrotoxicity/Renal failure and renal calculi are the very common disorders faced due to the modified life style and drug usage. The term renal failure primarily denotes failure of the excretory function of kidney, leading to the retention of nitrogenous waste products of metabolism in blood. In addition, there is failure of regulation of fluid & electrolyte balance along with endocrine dysfunction. Urolithiasis is a multifactorial urological disorder defined as the calculi in any location in the urinary tract including Kidneys and bladder. The following siddha formuilations have been generally recommended for the treatment of urogenital diseases are Neer mulli kidineer, Thetran kottai leghyam, Nannari manapagu, Seenthil kudineer, Mathulai manapagu, Nerunnjil kudineer, Nandukkal parpam, Kalnar parpam, kukkil parpam, Shilajit parpam, etc. Most of these formulations are multiherbal. All the plants are known to have nephroprotective and antiurolithiatic activity. In this work the herbal plants present in each formulations are studied for its antioxidant property, there by its nephroprotective activity and antiurolithiatic activity. The study showed that most of the plants used in the herbal siddha formulation is proved to possess those activity and it is useful in management of Nephrotoxicity and Urolithiasis.

KEYWORDS: Nephrotoxicity, Urolithiasis, Siddha formulation, Herbalism, renal calculi.

POSTER PRESENTATION

ABSTRACTS

TPV16/PP/001

DEVELOPMENT OF ANALYTICAL METHODS AND VALIDATION OF BROMINIDINE TARATRATE BY HPLC AND UV SPECTROSCOPY METHOD

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ABSTRACT

Brimonidine tartrate (used as adrenergic alpha -2 receptor agonists and Anti hypertensive agent) ophthalmic solution 0.2% is used for lowering intra ocular pressure in patients with open-angle glaucoma or ocular hypertension. A simple, precise and accurate, RP-HPLC method was developed for Brimonidine tartrate. In order to achieve a better separation of Brimonidine tartrate, the Mobile phase used was the mixture of Acetonitrile, Triethylamine and phosphoric acid in the ratio of 80:20:0.2 v/v/v respectively. The Chromatographic conditions includes a Column is Zorbax Eclipse plus C8, (250 X 4.6 mm); 5 µm maintained at ambient temperature and the Flow rate of 1.0ml/min with the Injection volume of 10µL/ min for 8 min. and the Detector wave length selected was 254 nm. The retention time was found to be 3.9 min. The chromatographic conditions were optimized in terms of mobile phase composition (±5 %), flow rate (±0.2 %) and wave length (±5 nm). Linearity was determined for Brimonidine tartrate at 50% - 150 % concentration of 24.87-74.60 µg/ml. The correlation coefficient ('r') values were found to be 0.9990. The %RSD of system suitability for Brimonidine tartratewas found to be 0.1. The average percentage recovery range was found to be 100.3 %. The robustness studies were performed by changing the mobile phase composition (90% to 110% of the organic phase), flow rate (1.0 ml/min ±0.2 ml/min), wavelength (254 ±2 nm), column oven temperature ± 5^{o}C and pH of Mobile phase ± 2 Units. The % RSD for peak area is within the accepted limit, which is less than 2%. The developed method was selective and specific for the drug as there was no interference from the opthalamic solution excipients. Hence this method found to be suitable in quantifying the Brimonidine tartrate without any physical separation and might be employed in pharmaceutical formulations.

Keywords: Brimonidine tartrate, RP-HPLC, Method development and Validation.

TPV16/PP/002

A NOVEL HPLC METHOD DEVELOPMENT FOR SIMULTANEOUS DETERMINATION OF UBIDECARENONE AND VITAMIN E ACETATE IN CAPSULE DOSAGE FORM

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ABSTRACT

Ubidecarenone and vitamin E acetate are biologically active compounds. Both the drugs are having anti-oxidant property and used as a dietary supplement to reduce the mortality caused by cardiovascular diseases.The literature survey revealed few spectrometric methods, HPLC and bio-analytical methods are reported for determination of ubidecarenone and vitamin E acetate alone or in combination with other drugs. But no method has been reported for the estimation of ubidecarenone and vitamin E acetate in capsule dosage form. Hence the main objective of the proposed method is to develop and validate a simple, accurate and sensitive HPLC method for the simultaneous determination of ubidecarenone and vitamin E acetate in capsule dosage form as per ICH guidelines. The chromatographic separation of drugs were achieved using Hypersil C_8 column (250mm x 4.6mm, 5µ) in isocratic elution mode with a mobile phase of Methanol: Ethanol: n-Hexane (80:10:10 v/v/v) at a flow rate of 1mL/min with UV detection at 210 nm. The optimized method produced sharp peaks with good resolution, minimum tailing factor and satisfactory retention time were found to be 5.745 and 12.565 for vitamin E acetate and ubidecarenone respectively. The results of all validation parameters are within the acceptance critieria. The proposed study results confirm that the developed method is a suitable technique for simultaneous estimation of ubidecarenone and vitamin E acetate in combined dosage form and it can be successfully applied for routine analysis.

Keywords: Ubidecarenone, Vitamin E acetate, RPHPLC, Method development

TPV16/PP/003

GENOTOXICITY EVALUATION OF THE GEMCITABINE HYDROCHLORIDE BY AMES TEST

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ABSTRACT

Genotoxicity evaluation is an in vitro and in vivo test processes to decide the unwanted effects of chemical entity. It helps to evaluate the effect of chemical substance towards the induce genetic damage by various mechanisms. Regulatory authorities framed strict measures to control the genotoxic impurities in the active pharmaceutical ingredients. There is various monograph book is there where they nicely described some of related substance as impurities raised by different level like last intermediates of synthesis, products of incomplete reactions, products of over reactions, impurities originating from starting materials, impurities originating from solvent materials, Impurities originating from catalysis. Active pharmaceutical ingredients undergo degradation with uncertain pathway hence the biosafety of those materials certainly could not be concluded in the initial stage. Gemcitabine.HCL is new anticancer nucleoside which is most popular now a days in pharma sector. Gemcitabine.HCL contains two impurities according to pharmacopoeia cytosine and gemcitabine alpha anomer. So my basic work is that to evaluation of genotoxicaffect of those impurities present in gemcitabine.HCL bulk drug. By the AMES test easily to find the impurities content as a genotoxic property. To conclude the bio-safety, all the degradation product should be examined for their mutagenic character, all the impurities bio safety profile should be recorded by bulk drug manufacturers.

TPV16/PP/004

SCREENING ETHANOLIC EXTRACT OF MIMOSA PUDICA FOR ITS ANXIOLYTIC ACTIVITY

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ABSTRACT

The objective of our investigation was to determine the anxiolytic property of the leaf extracts of Mimosa pudica. This is a plant used in traditional medicine to treat anxiety. Ethanolic extract of the leaf was prepared using soxhlet apparatus by continuous hot percolation method. The anxiolytic activity was evaluated by elevated plus maze (EPM) and hole board apparatus using swis albino mice. For all in vivo tests, doses of 200 and 400 mg/kg body weight were used. It was observed that the extract significantly increased the duration of anxiolytic activity and the results were positive for forced swimming and tail suspension tests. The time spent in open arm in EPM test was increased and the number of head pokes in the hole board test were decreased when compared to the control group of mice. The overall results of the study indicated significant anxiolytic activities of ethanol extract of Mimosa pudica (M.pudica) leaves. Hence this plant deserves further investigation to isolate.

KEYWORDS: Mimosa pudica, elevated plus maze, hole board.

TPV16/PP/005

ISOLATION OF COMPONENT FROM Azimatetracantha Lam ROOTS AND ITS ANTIDIABETIC ACTIVITY

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ABSTRACT

The present study was carried out for isolation of components from roots of AzimatetracanthaLam and its anti-diabetic activity .The extraction of the plant was done with hexane, chloroform and ethanol by cold maceration method. The extract from ethanol gives high percentage yield. The preliminary phytochemical studies of various extracts was performed. The flurescence analysis was carried out .compounds from Azimatetracantha was isolated and characterized from column chromatography. Melting point of the compound was found to be 269℃.It is freely soluble in organic solvents .The IR spectra of isolated compound gives spectral bands at 2930-2875 cm^{-1}(C-H strectching) and 1715 cm^{-1}(C=O ketone).The isolated compounds of present study were characterized and confirmed by ^{1}H NMR and mass spectral data. From the spectral data ,we found that the compound may be similar to triterpenoidfriedelin. The antidiabetic activity of hexane,chloroform,ethanol were carried out in the dose level of 200mg/kg. The ethanol extract was found to be significant when compared to other two extracts.Antidiabetic activity was done in streptozotocin induced diabetic rats using glybenclamide as standard drug.serum biomarkers were estimated and ethanolic extract shows significant positive effects in these parameters.

TPV16/PP/006

EVALUATION OF *Eclipta alba* ETHANOLIC EXTRACT FOR ANTI-PARKINSON'S ACTIVITY

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ABSTRACT

To evaluate the antiparkinson activity of eclipta Alba in haloperidol induced Parkinson's diseases in mice. Parkinson's disease was induced by administering haloperidol (2.0mg/kg by i.p) daily for a week. The mice was divided into 5 groups. Group 2 receviedhaloperidol(1mg/kg body weight). Groups 3 received combination of levodopa and carbidopa (6.75mg/200gm by i.p) along with haloperidol and group 4 and 5 received eclipta Alba extract (200 and 400mg/kg by p.o), respectively for seven days along with haloperidol. To evaluate the antiparkinsons effect of elipta Alba, catalepsy bar test,rotarodtest,actophotometer and hole board experiment were used.One way ANOVA was used to test statistical significance followed by Bonferroni multiple comparison test.Eclipta alba extract (200 and 400mg/kg by p.o) was found to decreases the duration of catalepsy significantly ($p<0.001$) in catalepsy bar test as compared to haloperidol group,and significantly increases ($p<0.001$) fall off time in ,rotarod test ,actophotometer and hole board test as compared to haloperidol group. The result of the present study conclusively shows the antiparkinsons activity of eclipta Alba in haloperidol induced Parkinson's disease in mice.

KEYWORDS: Parkinson's diseases,ecliptaAlba,haloperidol,levodopa.

TPV16/PP/007

MOLECULAR DOCKING STUDIES OF BENZIMIDAZOLE AND IMIDAZOLE DERIVATIVES

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ABSTRACT

Molecular docking is one of the most frequently used methods in SBDD(Stucture based drug design). The aim of the present study of molecular docking for the compounds of benzimidazole and imidazole derivatives were done with the enzymes CYCLOOXYGENASE ENZYME from PDB (protein data bank). COX1-is known to be present in most tissues and maintains the normal lining of the stomach,involved in kidney and platelet function. COX-2 produces prostaglandins resulting in inflammation at the site of inflammation.Studied for all aspects with Argus Lab observed with Best Ligand pose,Docking Run score and Mole Dock score. Out the compounds docking of COMPOUND2 (2E)-3-(1H-imidazol-2-yl)-2-phenylprop-2-enoic acid, showing score-8.625 was predicted to be the best with the enzymes.

KEYWORDS: Molecular Docking, Benzimidazole and imidazole derivatives, Cyclooxygenase enzyme, Inflammation

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TPV16/PP/008

ANTIUROLITHIC ACTIVITY OF EMBLICA OFFICINALIS

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ABSTRACT

Emblicaofficinalisbelongs to the family Euphorbiaceae have been reported for pharmacological activities such as memory enhancer, diabetes, anti-cancer, anti-tussive, dermoprotective, pancreas disorders, anti-aging, cerebroprotective, analgesics, cardioprotective, immunostimulant, osteoporosis, hair tonic, nerve tonic, immunomodulatoryetc,This fruit contains secondary metabolites such as tannins, alkaloids, phenolic compounds, amino acids, carbohydrates, vitamin-C, flavanoids, ellagic acid, chebulinic acid, quercetin, chebulagic acid, emblicianin-A, gallic acid, emblicanin-B, punigluconin, peduculagin, citric acid, ellagotannin, trigallyl glucose and pectin. The present study is focussed to evaluate anti urolithicacticityEmblicaofficinalis on ethylene glycol induced urolithiasis in rats. The parameters such as calcium, phosporous and magnesium in urine, urine volume, urine pH and serum analysis were carried out.Antiurolithic activity was assessed by the collection and analysis of urine, urine volume, urine pH and serum analysis.There was a significant decrease in total protein and albumin, serum BUN, creatinine, serum uric acid level in Emblicaofficinalis treated group when compared with urolithic control. There was significant increase in urine volume and urinary pH also. Dissolution of stones can be possible by alteration of pH and by increasing the urinary volume. The presence of several phytoconstituents may responsible for the antiurolithic activity of Emblicaofficinalis.

Keyword: Emblica officinalis**,** Osteoporosis, Urine analysis, Ethylene glycol.

TPV16/PP/009

FUNCTIONAL GENOMICS BY MASS SPECTROPHOTOMETRY

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ABSTRACT

Functional proteomics, a type of proteomics in which proteins are purified with a specific function in mind i.e. purification of a multi-protein complex with defined function. Proteomics study used to designate for the large scale characterization of the entire protein complement of a cell line, tissue or organism. At the time proteome analysis was mainly associated with the display of crude protein mixtures, such as tissue homogenates on two dimensional gels. Differences between the displayed spots in the normal and diseased state, for example, would be measured by image analysis of the stained protein spots and would correlate with the disease. A crucial and previously difficult step was the identification of such spots. In 1996 a first large scale protein identification project was performed which unambiguously demonstrated that mass spectrometry had the sensitivity, specificity and throughout to perform this task. In proteomics the premier task of mass spectrometry is the identification of very low levels of protein which have been separated by one or two dimensional gel electrophoresis.

TPV16/PP/010

METHOD DEVOLPMENT AND VALIDATION FOR SIMULTAENOUS ESTIMATION OF AMBRISENTAN IN TABLET DOSAGE FORM BY HPLC

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ABSTRACT

A simple rapid and highly selective RP-HPLC method was developed for the simultaneous estimation development and validation of Ambrisentan (AMB) tablet dosage form. It was determined by reverse phase HPLC method, using mobile phase A:B (30:70). Mobile phase is a phosphate buffer ph3.0 B Acetonitrile: water (90:10) Using a kromosil ODS C18 column 5µ(250×4.6mm) as stationary phase detection, carried out by VWD detector at 210nm the specificity of ambrisentin shown in chromatograms.There was no interference in this method, good separation between all peaks, no impurity.The drug obeys the beer's law. The precision was found in limits not more than RSD 2% was 0.45 for AMB, in robustness parameter the change in flow temperature pH and mobile phase composition the percentage RSD was found to be less than 2% and system stability was not more RSD2%. The retention time 4.82 min during solution stability studies upto 48 hrs purity acceptance criteria 98-102%.It indicates the method can be used for determination.All the parameters meets ICH guidelines for method of validation and found to be precise and accurate. It can be concluded that the reported method is more economical and can find practical application& may be recommended for routine and QC analyses of investigated drug , to provide simple and accurate reproducible quantitative analysis for determination of ambrisentan in tablet dosage form

TPV16/PP/011

HEPATOPROTECTIVE ACTIVITY OF HYDRO-ALCOHOLIC EXTRACT OF BIXAORELLANA L AGAINST PARACETAMOL INDUCED HEPATOTOXICITY IN ALBINO RATS

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ABSTRACT

The hydro alcoholic extract of leaves of Bixaorellana L was examined for its heptatoprotective activity against the liver damage induced by paracetamol will be associated with development of oxidative stress. In addition, hepatospecific serum markers will be disturbed. Bixin extracted from plant is used as antioxidant and liver protective properties in clinical research. Treatment of the albino rats with hydro alcoholic extract of the leaves of bixaorellana L prior to administration of paracetamol significantly reduced the disturbance in liver function. Liver function were measured by assessment of total protein, total bilirubin, ALP, ALT, SGPT, SGOT and AST. Oxidative stress parameter and antioxidant markers were also evaluated. The plant extract may be acting by mechanism of competitive inhibition of metabolism of paracetamol, or by inhibition of cytochrome p-450, promotion of glucuronidation and activation of the function of reticuloendothelial system. Moreverhistopathological evaluation was performed in order to assess liver case regarding inflammatory infiltration or necrosis. Animals were observed for any symptoms of toxicity after administration of hydro alcoholic extract of the plant bixaorellana L and its found to protect the liver to large extent and reverse all the elevated biochemical levels to safe level. These results suggests that the plants extracts shows significant hepatoprotective activity against paracetamol induced damage at 200mg/kg dose level, while the 100mg/kg shows moderate activity.

TPV16/PP/012

ROLE OF CLINICAL PHARMACIST IN MANAGEMENT OF BETA THALASSEMIA-A case study

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ABSTRACT

Beta thalassemia is inherited autosomal recessive disorder characterized by reduced hemoglobin synthesis associated with mutations in either α or β chain of the molecule. The defect can be complete absence of β-globin protein (β0) or severely reduced synthesis of β-globin proteins (β+). The complications of beta thalassemia are extra-medullary hematopoiesis, splenectomy, cholelithiasis, asplenia. The objective of this study is highlighting the role of clinical pharmacist in the management of beta thalassemia particularly preventing adverse drug reaction and monitoring drug interactions and medication counseling. This case study is of a 12 year old child being admitted in hospital with complaints of abdominal distension, weakness in lower limbs, difficulty in breathing,decreased frequency in micturition. Past medical history of thalassemia major and splenectomy.Ultra sound suggest that hepatomegaly and moderate ascites and all the hematological parameter found to be abnormal.Total of 19 drugs has been given to the patient.On day 7 blood transfusion of 200 ml paced cell also given.From the medication administered there is the possibilities of drug interaction and transfusion related infections. The common drug interactions in thalassemic patients are Aspirin-furosemide, Aspirin-spironolactone, deferiprone-calcimax, calcimax-thyroxine. Prevalence of beta thalassemia is 1.0% - 14.9% and over 9000 thalassemic children are born every year. From the given study concluded that clinical pharmacist role is very crucial in management of beta thalassemia.

TPV16/PP/013

ROLE OF CLINICAL PHARMACIST IN THE MANAGEMENT OF SYSTEMIC LUPUS ERYTHEMATOSUS

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ABSTRACT

Infections remain a major cause of morbidity and mortality in patients with SLE (Systemic Lupus Erythematous)SLE patients may also develop opportunistic infections, especially when treated with immunosuppressive agents. Judicious use of corticosteroids and cytotoxic drugs is critical in limiting infectious complications. Antimicrobial prophylaxis, immunizations, hygienic measures and patient education can decrease the impact of infections among SLE patients. Herein, we describe a case of SLE with risk of infection due to long term use of immunosuppressants. Monitoring parameters such as Blood pressure , color change in fingers to white, blue & red. Observe any breathlessness, skin color ,frequent attacks of fever, diarrhea, abdominal pain, muscle pain, Joint stiffness, swelling,Infections in SLE patients. A retrospective study of this case shows the following risk factors for developing an infection: Long-term use of immunosuppressants, High dose steroids, Immune dysfunction Defects in the complement system Literature on infection in SLE is complex .Prevention strategies such as simple Hygiene,antimicrobial agents , Immunizations should be done. The mortality rates remain three times higher as compared with the general population. From the given study concluded that the role of clinical pharmacist is very crucial in management of SLE.

TPV16/PP/014

ROLE OF CLINICAL PHARMACIST IN HANDLING LASA DRUGS AND LIST OF ERROR PRONE LASA DRUGS

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ABSTRACT

LASA is one of the most common causes of medication errors leading to dangerous adverse effects and is of concern worldwide.LASA includes proprietary and nonproprietary names contributing to this confusion are illegible handwriting , incomplete knowledge of drug names, improper pronunciation , similar packaging and labeling similar dosage forms etc. The aim of the current study is to identify LASA drugs in a tertiary care hospital in Chennai and it has matched with standard LASA drugs published by ISMP.Objective of the study is minimizing the adverse effect because of LASA drugs. Among the formulary in the tertiary care hospital 16 pairs of sound alike and 16 pairs of look-alike drugs were identified. In order to prevent the confusion during dispensing drugs are labeled in different colors. All the LASA drugs during prescribing there is the chances of medication errors and some of the examples are described here. Anxit (alprazolam) and Amlong (amlodipine)– Look alike drugs Alprazolam – benzodiazepine is a sedative drug used to treat anxiety, depression etc. Amlodipine – calcium channel blocker is used to treat angina, blood pressure etc. Nitrocin (nitroglycerin) and Nitrosun (nitrazepam) – sound alike drugs Nitrazepam –benzodiazepine causes sedation Nitroglycerin - anti-anginal drug .From the present study concluded that pharmacist should play a vital role in minimizing LASA related medication error.

TPV16/PP/015

DRUG DELIVERING CONTACT LENSES

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ABSTRACT

Current opthalmic drug delivery systems are insufficient, especially eye drops, which allow mostly 95% of the drug contained in the drops to be lost mostly by tear drainage. The use of soft contact lenses has been proposed as a method to deliver drugs to the eye in an efficient manner. Scientists have developed soft contact lenses which can dispense prescription drugs over a period of weeks to the exact spot in the eye where they are needed. This has been developed inorder to over come traditional eye drops that may mix with tears which then drain into the nasal cavity and get into the blood stream where these drugs can cause serious side effects. ANUJ CHAUHAN, Ph.D, University of Florida in GAINES VILLE claims that cataract being a second leading cause to vision loss and blindness in the world could be treated by using these contact lenses. Chauhan and his colleagues developed a new extended drug delivery approach by incorporating Vitamin E along with the the raw materials of contact lenses during manufacture. The drugs contained in the contact lenses can be released slowly to stay in the eye. The drug ladden contacts could be worn far upto two weeks, delivering a steady supply of medication directly into the eye.

Key words: opthalmic drug delivery, cataract, soft contact lenses, vitamin E**.**

TPV16/PP/016

FABRICATION AND CHARACTERIZATION OF A COLLAGEN COATED ELECTROSPUN POLY(3-HYDROXYBUTYRIC ACID)–GELATIN NANOFIBROUS SCAFFOLD AS A SOFT BIO-MIMETIC MATERIAL FOR SKIN TISSUE ENGINEERING APPLICATIONS

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ABSTRACT

The Wound healing is a global health care problem. The use of a suitable dressing material by means of a nanofibrous scaffold with traditionally important medicine can help to repair the damaged skin tissue. An ideal wound dressing material should mimic the function of an extracellular matrix with its improved physiochemical, biological and antimicrobial properties. In this study, the significance features of a collagen coated electrospunpoly(3-hydroxybutyric acid)–gelatin nanofibrous scaffold with a bioactive Cocciniagrandis extract (CPE) meets the requirements for a wound dressing material. The nanofibrous scaffold with collagen has an attraction for fibroblast, which increases cell adhesion and proliferation. The fabricated nanofibrous scaffold with collagen was characterized physio-chemically using Fourier transform infrared (FTIR) spectroscopy, scanning electron microscopy (SEM), and it showed acceptable antibacterial property with both Gram positive and Gram negative bacteria. The thermal and in vitro stability of the nanofibrous scaffold was studied and it was found to have stability more than that required for a wound dressing material. The nanofibrous scaffold supports good swelling property with better porosity for oxygen permeability. The mechanical property of the nanofibrous scaffold showed a Young's modulus of 2.99 0.16MPa. The biocompatibility of the nanofibrous scaffold exhibits increased cell adhesion and proliferation of both NIH 3T3 fibroblast and human keratinocytes (HaCaT) cell line. The in Vitro fluorescence staining of the nanofibrous matrix using Calcein AM and DAPI exhibits the cell material interaction of the collagen coated nanofibrous scaffold corresponding to increased cell adhesion and proliferation.This approach with a nanofibrous scaffold coated with collagen can be a promising tool in www.rsc.org/advances skin tissue engineering and can be useful as a wound dressing material in skin tissue engineering applications

TPV16/PP/017

MAGNETIC MICROSPHERE : AS TARGETED DRUG DELIVERY SYSTEM

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ABSTRACT

Specific delivery of drug to desired target sites with minimum side effect constitutes one of the most exciting challenges in medicine. One way of achieving such targeting of drug is by the use of magnetic microspheres in combination with an external magnetic field. Magnetic microspheres were developed to minimize renal clearance and to increase target site specificity. they can be used to entrap a wide variety of drug. This system has a great potential in the treatment of localized tumors in the regions of well-defined blood supply. Magnetic microspheres can be filled with drug or radioactive materials to treat a variety of illnesses. Magnets applied outside the body attract the spheres to the disease site where they delivery therapeutics in a targeted way. The magnets attract the microspheres to the immediate area of the wound site and stop them there. The spheres gradually break down and release growth factors over a period of weeks, allowing blood vessels and damaged tissues to re-grow and repair. The present paper is aimed to review the mechanism, preparation and application of magnetic microspheres.

Keyword :- magnetic microsphere, magnetically drug targeting, Preparation, mechanism, application,

TPV16/PP/018

COUMARINS: A NEW APPROACH AGAINST DENGUE

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ABSTRACT

Dengue is an emerging viral most common disease in humans. A supporting evidence from WHO shows that the number of cases of dengue has doubled up from 2014-2016. Coumarins are group of natural products having high affinity and specificity to different molecular targets for anti viral agents. The antiviral activity (anti HIV, anti HCV, influenza and herpes simplex virus) of coumarins has been identified. The primary objective of this study was to investigate the antiviral activity of coumarins against dengue virus using in silicodocking.Coumarin analogs like 4- hydroxycoumarin, 7- hydroxycoumarin, furanocoumarin, pyranocoumarin, 3-phenyl and 4- phenyl coumarin were selected. Docking studeis were carried out using Patchdock .Patchdock performs structure prediction of protein small molecule complexes. High Patch dock scores are considered as a good indicator of successful docked confirmation. Based on docking scores, 7-hydroxy coumarin is found to be a competitive analogue against dengue virus.

TPV16/PP/019

STUDY ON USE OF ANTIBIOTICS IN POST OPERATIVE GYNAECOLOGY CASES IN TERTIARY CARE TEACHING HOSPITAL, RMMCH

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ABSTRACT

Background: Antibiotics are the more widely used drugs to prevent surgical site infections in gynaecology surgeries even though there was evidence of complication. The large exposure of antibiotic leads to high profile resistance which paved the way to high health care cost ,lack of resources.Objective:To study the drug use pattern of antibiotics in post operativegynaecological cases and it's cost effective analysis. Material method:Prospective observation study, All the patients admitted in gynaecology ward in RMMCH during in 4 month study period January to april 2016 who has compliance with inclution and exclusion criteria. Results:Out of 64 patients enrolled in this study were most of the patients are at the age of 35-45years (53.125%) followed by post menopausal age group were 31.25%. In our study we observed that 77.8% of patients have undervent combination therapy in which cefotaxime+metronidazole were the most (62.86%).Cefixime (80%) were the most prescribed drug of choice for monotherapy (22.22%).

Key words: encephalopathy, electroencephalogram

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TPV16/PP/020

COMPARISON OF EFFECTS OF METFORMIN, PIOGLITAZONE AND SITAGLIPTIN ON GLYCEMIC CONTROL, CARDIO METABOLIC RISK FACTORS AND OXIDATIVE STRESS

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ABSTRACT

Metformin a biguanide, Pioglitazone from thiozolidinedione group and recently Sitagliptin a dipeptidyl peptidase – 4 inhibitor are commonly used oral hypoglycemic agents now a days for treating Type 2 Diabetes mellitus and other insulin resistant conditions. Each drug has different mechanism and distinguished set of metabolic actions on various organs of our body. The aim of the study is to compare the effects of Metformin, Pioglitazone and Sitagliptin on oxidative stress, glycemic control and other cardio metabolic risk factor in albino rats.

TPV16/PP/021

BIOAVAILABILITY ENHANCEMENT: DRUG SOLUBILITY, PERMEABILITY, STABILITY AND GASTRO INTESTINAL RETENTION

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ABSTRACT

The therapeutic effectiveness of a drug depends upon the ability of the dosage form to deliver the medicament to its site of action at a rate and amount sufficient to elicit the desired pharmacological response. This attribute of the dosage form is referred to as physiological availability, biological availability or simply bioavailability. In addition the physicochemical property of most drugs that has greatest influence on their absorption characteristics from the gastro intestinal tract is dissolution rate. The best way of accessing therapeutic efficacy of drugs with a slow dissolution rate is invivo determination of bioavailability which is usually done whenever a new formulation is to be introduced into the market. Specifically, the pharmaceutical attempts, whether optimizing the formulation, manufacturing process or physicochemical properties of the drug, are mainly aimed at altering the biopharmaceutic properties of drug in several ways. This review is aimed to discuss about the enhancement of drug solubility or dissolution rate, drug permeability, drug stability and gastrointestinal retention.

Keywords: Drug solubility, Drug permeability, Stability and Gastro Intestinal retention.

TPV16/PP/022

PHARMACEUTICAL EXCIPIENTS: SIGNIFICANCE AND APPLICATIONS

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ABSTRACT

Many dosage forms formulated today are complex system containing many other components along with the active pharmaceutical ingredient (API), these compounds are generally added along with the active pharmaceutical ingredients in order to protect, support or enhance stability of the formulation, help to improve the bioavailability of active drug, enhance overall safety and effectiveness of the formulation during its storage and use etc. These components are generally termed as excipients. This review is aimed to details the classification, advantage, disadvantage, selection, physicochemical and biopharmaceutical drug excipient interactions, stability testing and excipients used in solid, liquid and semisolid dosage forms.

Key words: Classification, Drug excipient interactions, Stability testing, Excipients used in solid, liquid and semisolid dosage forms.

TPV16/PP/023

DISSOLUTION TESTING METHODS: CONVENTIONAL AND NOVEL DOSAGE FORMS

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ABSTRACT

Dissolution is the process by which a solid solute enters a solution. In the pharmaceutical industry, it may be defined as the amount of drug substance that goes into solution per unit time under standardized conditions of liquid/solid interface, temperature and solvent composition. Drug dissolution testing plays an important role as a routine quality control test, for characterizing the quality of the product and also plays a major role in drug development. Because, dissolution tests were first developed to quantify the amount and extent of drug release from solid oral dosage forms including immediate/sustained release tablets and capsules, later on its use is widened to a variety of novel dosage forms. Due to the complexities in the drug delivery of novel dosage forms there is a need in developing modified dissolution testing methods in order to characterize the invitrorelease of these dosage forms. This article is to review USP dissolution apparatus and to present an updated review of non pharmacopeial dissolution methods for testing conventional and novel dosage forms along with various dissolution medias and their appropriate uses.

Keywords: Dissolution testing, Dissolution medias.

TPV16/PP/024

EBOLA VIRUS-EMERGING INFECTION MICROORGANISM-A CRITICAL REVIEW

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ABSTRACT

Ebola virus is transmitted to people as a result of direct contact with body fluids containing virus of an infected patient. The incubation period usually lasts 5 to 7 d and approximately 95% of the patients appear signs within 21 d after exposure. Typical features include fever, profound weakness, diarrhea, abdominal pain, cramping, nausea and vomiting for 3-5 days and maybe persisting for up to a week. Laboratory complications including elevated aminotransferase levels, marked lymphocytopenia, and thrombocytopenia may have occurred. Hemorrhagic fever occurs in less than half of patients and it takes place most commonly in the gastrointestinal tract. The symptoms progress over the time and patients suffer from dehydration, stupor, confusion, hypotension, multi-organ failure, leading to fulminant shock and eventually death. The most general assays used for antibody detection are direct IgG and IgM ELISAs and IgM capture ELISA. An IgM or rising IgG titer (four-fold) contributes to strong presumptive diagnosis. Currently neither a licensed vaccine nor an approved treatment is available for human use. Preclinical evaluation is also underway for various vaccine candidates. One is a chimpanzee adenovirus vector vaccine; other vaccines involve replication-defective adenovirus serotype 5 and recombinant vesicular stomatitis virus.

Keywords: Ebola, Outbreak, Reservoir, Transmission, Symptoms, Vaccine

TPV16/PP/025

SOLID DISPERSIONS: PREPARATIONS AND CHARACTERIZATIONS

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ABSTRACT

The enhancements of oral bioavailability of such poorly water-soluble drugs often show poor bioavailability because of low and erratic levels of absorption. Drugs that undergo dissolution rate limited gastrointestinal absorption generally show improved dissolution and bio availability as a result of reduction in particle size. However, micronizing of drugs often leads to aggregation and agglomeration of particles, which results in poor wettability. Solid dispersions of poorly water-soluble drugs with water-soluble carriers have been reduced the incidence of these problems and enhanced dissolution. The present review is aimed to discuss the advantages, disadvantages and the method of preparation, and characterization of the solid dispersion.

Keywords: Preparation, Characterization of Solid dispersion.

TPV16/PP/026

TABLET DEFECTS: CAUSES AND REMEDIES

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ABSTRACT

Tablets are solid dosage form playing key role often in first place among all over dosage forms. They having more stability, reliability. Easy to use, administer and packaging. Suitable to all controlled dosage forms. Favors towards manufacturing and technology of others. An ideal tablet should be free from any visual defect or functional defect. Besides, a professional and experienced technician can turn any ordinary product into a high quality one whereas a novice or unexperienced one cannot and might even be afraid to adjust their machines in order to prevent or correct problems. The key is to understand the different areas of the equipment and have thorough knowledge of the process. This is why one must undergo proper training in order to be able to fix equipment and prevent any or minimize these problems. When the equipment is properly operated the tablet production will go smoothly. However, an industrial pharmacist usually encounters number of problems during manufacturing which may be due to moisture, improper drying, high speed machines, tools setting problem, excess use of binders, lack of proper lubricant selection, air interaction, lack of knowledge, improper training, size, shape, chipped edge, crack etc., The present review pinpoints the possible causes of these defects and offers advice on preventing and fixing the source of the problems.

TPV16/PP/027

SOLID LIPID NANOPARTICLES: PREPARATIONS AND CHARACTERIZATIONS

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ABSTRACT

Solid lipid nanoparticles (SLNs) are colloidal carriers developed in the last decade as an alternative system to the existing traditional carriers (emulsions, liposomes, and polymeric nanoparticles). They are a new generation of submicron-sized lipid emulsions where the liquid lipid (oil) has been substituted by a solid lipid. SLN offer unique properties such as small size, large surface area, high drug loading and the interaction of phases at the interfaces, and are attractive for their potential to improve the performance of pharmaceuticals, nutraceuticals and other materials. Moreover, SLNs combine the advantages and avoid the drawbacks of several colloidal carriers of its class such as physical stability, protection of incorporated labile drugs from degradation, controlled release and excellent tolerability. The present review is aimed to highlight the SLN advantages, production methodology, characterization and applications.

Keywords: Sln Advantage, Production Methodology, Characterization, Application.

TPV16/PP/028

HEPATITIS B TREATMENT: NEW PERSPECTIVES

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ABSTRACT

Hepatitis is an inflammation of the liver. There are five main hepatitis viruses referred to as types A,B,C,D and E. Hepatitis B lead to chronic disease in hundreds of millions of people and together are the most common cause of liver cirrhosis and cancer. Hepatitis B infection is transmitted through sexual contact, contact with contamination blood and from mother to child. The signs and symptoms of acute and chronic hepatitis B are fatigue ,loss of appetite, nausea, jaundice, pain(in the upper right abdomen)and liver disease . Hepatitis can be treated by administration of drugs such as lamivudine, adefovir, telbivudine and entecavir. This can also be effectively prevented by prophylactic administration of vaccines such as twinrix, Engerix-b, Recombivax HB.

KEYWORDS: Chronic hepatitis B-covalently closed circular DNA-hepatitis B virus.

TPV16/PP/029

STEM CELL THERAPY

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ABSTRACT

Regenerative therapy is a fast evolving novel domain which involves incorporating stem cells ,genes and growth factors in diseased organ for tissue regeneration. Stem cells are unspecialised cells that have ability to differentiate and regenerate. Understanding signals inside and outside cells that control stem cell differentiation is helps to design cell based therapies.In the long run it is hypothesized that stem cells therapy may be the basis for treating many genetic, neurodegenerative and metabolic disorder and end stage diseases for which otherwise treatment is not available.This review focus on the various aspects of stem cell therapy.

Key words: Therapy, regeneration, stem cell.

TPV16/PP/030

EMERGENCE OF NEW DELHI METALLO-BETA-LACTAMASE (NDM-1) ENTEROBACTERIACEA AND CHALLENGES FOR PHARMACIST

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ABSTRACT

The world has seen the emergence of many micro-organisms in the recent past, which can curb human population with their newly built genetic make-up. The latest addition to this list of panic creating organisms is, bacteria encoding the gene for New Delhi metallo-beta-lactamase (NDM-1). NDM-p1 is an enzyme that can hydrolyze and inactivate carbapenems, which are used as a last resort for the treatment of multi-resistant bacterial infections. Names of these bacteria were not found in the medical literature before December 2009, because of which it can take the credit of becoming a powerful emerging bacteria, which are difficult to treat. Besides Escherichia coli and Klebsiellapneumoniae, other bacterial strains have also expressed the gene for NDM-1, which are detected in many countries. Antimicrobial resistance is a complex problem driven by many interconnected factors. As such, single, isolated interventions have little impact. Coordinated action is required to minimize emergence and spread of antimicrobial resistance. Using antimicrobial drugs only when they are prescribed by a certified health professional; completing the full treatment course, even if they feel better; never sharing antimicrobial drugs with others or using leftover prescriptions are some of the areas where Pharmacy professionals play a role to prevent the spreading of drug resistant strains.

Key words: Drug resistance, NDM-1, Enterobacteriacea, Metallo-beta lactamase.

TPV16/PP/031

NATURAL PRODUCTS IN MODERN DRUG DISCOVERY AND DEVELOPMENT

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ABSTRACT

Pharmacognosy deals with the natural drugs obtained from organisms such as most plants, microbes, and animals. Many important drugs including ephedrine, morphine, caffeine, salicylic acid, digoxin, taxol, galantamine, vincristine, colchicine, etc. etc. have originated from natural sources which continue to be good model molecules in drug discovery. Traditional medicine is also a part of Pharmacognosy and most of the developing countries still depend on the use of herbal medicines. Consequently, Pharmacognosy always keeps its popularity in Pharmaceutical sciences and plays a critical role in drug discovery. Natural products have been the backbone of all synthetic, semi-synthetic compounds. Natural products which have found direct medicinal application as drug entities, serve as chemical models or templates for the design, synthesis, and semi synthesis of novel substances for treating humankind's diseases. Current research in drug discovery from medicinal plants involves a multifaceted approach combining botanical, computational, phytochemical, biological and molecular techniques.It is evident that drug discovery from medicinal plants continues to provide new and important leads against various pharmacological targets including cancer, HIV/AIDS, Alzheimer's, malaria, and pain. Natural compounds are definitely valuable leads for drug discovery, identifying and the current importance of drugs of natural origin is undebatable.

Keywords: Natural products, Molecules model, Semi-synthesis, Drug discovery

TPV16/PP/032

ORODISPERSIBLE TABLETS

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ABSTRACT

Oral route of drug administration is the most common and preferred method of delivery as it is the simplest and easiest way of administering drugs. The rout offers ease of drug administration in a convenient manner and patients are more familiar with this rout. So, patient compliance and thus drug treatment is typically more effective with orally given medications when compared with other routes of administration, for example, parenteral. There are strong evidences that oral ad-ministration produces equally good clinical results, has fewer complications, is less costly and causes less patient inconvenience. For any drug to exhibit its prompt pharmacologic action, its serum concentration has to reach optimum level within a short period of time. Tablets and hard gelatin capsules constitute major portion of drug delivery systems that are currently available. However, many patients groups, such as the elderly, children and patients who are mentally retarded, non-cooperative, nauseated or on reduced liquid intake/diets have difficulties swallowing these dosage forms. Those who are travelling or have little access to water are similarly affected. To fulfill these medical needs, pharmaceutical technologists have developed a novel oral dosage form known as Orodispersible tablets (ODTs). The aim of this poster is to review the ideal properties, significance, characteristics, limitation, choice of drug candidates, challenges in formulation, approaches for preparation of ODTs, Patented technologies on ODTs, Suitable drug candidates for ODTs, Marketed product of ODTs, and Evaluation tests of ODTs.

Keywords: Fast disintegrating**,** Orodispersible Tablet, Dysphagia.

TPV16/PP/033

STUDIES ON ADDITIONAL PHARMACOLOGICAL ACTIVITIES AND DRUG-DRUG INTERACTIONS OF NEW CALCIUM CHANNEL BLOCKER-ISRADIPINE

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ABSTRACT

Calcium channel blockers are used as effective agent in various disorders of cardio vascular system such as angina, hypertension and heart failure. Abnormalities in calcium related processes are calcium ion channels may be related to the hyper excitability of neuronal and seizure activity. Calcium channel blockers such as verapamil, nifedipine, nicardipine, nimodipine and flunarizine were reported for their anti-convulsant. The aim is to study the effect of isradipine on Maximal Electroshock and picrotoxin induced convulsion in experimental animal.

TPV16/PP/034

NANOEMULSIONS FOR THE TRANSDERMAL DELIVERY OF DRUG

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ABSTRACT

Nanoemulsion (NE) is defined as an O/W or W/O emulsion producing a transparent product that has a droplet size from 20-200nm and does not have the tendency to coalesce. It is promising for transdermal delivery of drugs as an efficient route of drug administration. Several mechanisms have been proposed to explain the advantages of nanoemulsions for the transdermal delivery of drugs. In transdermal delivery, the goal of dosage design is to maximize the flux through the skin into systemic circulation. A useful strategy for improving percutaneous flux is to improve the concentration of drug or choose an appropriate vehicle for the transdermal delivery. The nanoemulsions system should be a promising vehicle due to powerful ability to deliver drug through skins. With these approaches, the aim of this present study is to review the potential of nanoemulsion formulation for transdermal delivery of pure phytopharmaceuticals and poorly soluble drugs. Some nanoemulsions have however exhibited sufficiently high level of stability for them to be proposed as vehicle for drug delivery. Using the transdermal route eliminates the side effects, increases patient compliance, avoids first-pass metabolism, enhance bioavailability and maintains the plasma drug level for a longer period of time.

KEY WORDS: Transdernmal, poorly soluble drug, phytopharmaceuticals, nanoemulsion.

TPV16/PP/035

YOGA AND NATUROPATHY: A LOGIC SCIENCE

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ABSTRACT

Ayurveda, Naturopathy and Yoga has been a part of Indian culture since long times. The combination of modern technology and Ayurveda will bring about drastic changes in health system. So the national rural health mission has decided to maintain Ayurveda, Yoga, Naturopathy system of indigenous medicine to help meet the challenge of shatya of healthcare professionals. Yoga has taken over fitness industry recently. Many people are preferring yoga for their health benefits. Naturopathy is a form of alternative medicine employing a wide array of "natural" treatments, including homeopathy, herbalism, and acupuncture, as well as diet (natural) and lifestyle counseling. The mechanism of acupuncture and v therapy is used to cure people with paralysis and its mechanism has to be still found out.

KEYWORDS: Ayurveda, Naturopathy, Yoga.

TPV16/PP/036

PERCEPTION ON ANTI-MYCOBACTERIAL PHYTOMOLECULES

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ABSTRACT

Tuberculosis is a second leading cause of death from a simple infectious organism that demands attention towards discovery of novel antitubercular compounds. Natural products and their derivatives is a source of fifty percent of all existing drugs offering a chemical diverse space for discovery of novel drugs. This review enlights the phytomolecules from 188 plant families, 692 genera and 808 species that screened against the mycobacteria. In total there are 633 phytomolecules curated against 25 target mycobacteria were identified and their drug likeness property were evaluated. These are screened based on target based approach. Structure based searching and comparison against various drug classes aids to the features of platform to speed up the antimycobacterial drug discovery.

Keywords: Antimycobacterium,Tuberculosis, Phytomolecules, Structure based searching.

TPV16/PP/037

PROTEIN KINASE INHIBITION IN CANCER THERAPY

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ABSTRACT

Protein kinase is one of the most intensively pursued classes of drug target with approximately 30 distinguish kinase target being develop to the level of phase 1 clinical trial. Receptor Protein kinase play an important role in signal transduction pathway that regulate cell division and differentiation. Protein kinase are essential in cellular signaling process that regulate cell growth, differentiation, migration and metabolism. They transfer phosphate from ATP to Tyrosine, Serine and Threonine residue in protein substrate. Abnormal catalytic activity of any kinase via transmutation or over expression play an important role in numerous pathological condition mainly in cancer. Kinase inhibitor has been widely used to probe the role of protein phosphorylation in cellular signaling. Important new class of potential curative agents in the management of cancer were Panitumumab, Vemurafenib, Gefitinib, Dabrafenib, the present review highlight the role of protein kinase and mechanism of its inhibitors in cancer therapy.

KEY WORD: Protein Kinase, Transmutation, Tyrosine, Cancer, Vemurafenib.

TPV16/PP/038

ROLE OF SPHINGOSINE-1-PHOSPHATE IN DISEASES

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ABSTRACT

Sphingosine-1-phosphate (S1P) is a simple, bioactive sphingolipid metabolite, play a critical role in various cellular processes such as proliferation, survival, migration, inflammation angiogenesis and endothelial barrier integrity. S1P recognized as a critical regulator of many pathophysiological processes, including cancer, atherosclerosis, diabetes, lung diseases and osteoporosis, etc. Many cells secrete S1P by two sphingosine kinase isoenzymes, (SphK1 and SphK2) catalyses the ATP – dependent phosphorylation of sphingosine to sphingosine-1-phosphate, and act in an autocrine and paracrine manner. Degradation of S1P is mediated by a reversible dephosphorylation, catalyzed by the Sphingosine-1-phosphate phosphatases and lipid phosphate phosphatases and irreversible dehydration to hexadecenal and ethanolamine phosphate by sphingosine-1-phosphate lyase (S1PL). S1P are mediated by a specific selective G-protein-coupled receptors ($S1P_{1-5}$), S1P generates downstream signals that play crucial role in developmental and diseases related pathologies, in addition to acting extracellularly , S1P can also act intracellularly , independently of $S1P_{1-5}$, affecting calcium homeostasis and cell proliferation.The SphKs/S1P/S1PL metabolic pathway is implicated in numerous human pathologies. This review focuses on the mechanisms of action of S1P and its role in different human diseases.

KEYWORDS: Shingosine-1-Phosphate, Shingosine-1-Phosphate Lyase, Shingosine-1-Phosphate Phosphatase.

TPV16/PP/039

PERCEPTION ON PHYTOPHARMACOPHORES IN MODERN MEDICINE

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ABSTRACT

For thousand of years phytomolecules have played vital role in health care and prevention of diseases. According to recent studies about 121 drugs prescribed in USA comes from natural sources out of which 90 of them either directly or indirectly from plant source. This, review highlights the role of natural product in drug discovery process. Vaccines, biological product, natural product derivative, synthetic derivative from natural product will be discussed in brief in this data mining. Between the years, 1981-2006 about 100 anticancer agents, 18 natural product mimics, 11 natural product pharmacophore and 9 pure natural products and that gives a very significant contribution to the health care system. This review will be helpful for the researcher's in the aspect of natural product drug discovery.

Keywords: Phytopharmacophores, DrugDiscovery, Naturalproducts, Phytomolecules.

TPV16/PP/040

A REVIEW ON LIPOSOMES : PREPARATION, APPLICATIONS

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ABSTRACT

Liposomes are small artificial vesicles of spherical shape that can be created fro cholesterol and natural non-toxic phospholipids. Due to their size and hydrophobic and hydrophilic character (besides biocompatibility), liposomes are promising system for drug delivery. Liposomes are extensively used as carriers for numerous molecules in cosmetic and pharmaceutical industries. Additionally, food and farming industries have extensively studied the use of liposome encapsulation to grow delivery systems that can entrap unstable compounds (for example, antimicrobials, antioxidants, flavors, and bioactive elements) and shield their functionality.liposomes can trap both hydrophobic and hydrophilic compounds, avoid decomposition of the entrapped combinations and release the entrapped at designated targets. the present review will briefly explain the characteristics of liposomes and explore the related problems and solutions proposed , with a focus on liposome preparation, characterizations, affecting factors, advantages, and disadvantages.

Keywords: preparation, characterization, stablisation problem.

TPV16/PP/041

POTENTIAL APPLICATIONS OF NATURAL ANTI-OXIDANT

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ABSTRACT

Various abiotic stresses lead to the overproduction of Reactive Oxygen Species (ROS) in plants and animals which are highly reactive and toxic causing damage to proteins, lipids, carbohydrates and DNA thus leads to oxidative stress. This oxidative stress causes damage to tissues and results in large number of diseases. Anti-oxidants can be natural or synthetic. Natural anti-oxidants can be taken up through diet as they are present in fruits, vegetables and spices. There are also certain synthetic antioxidants like BHT, BHA that also inhibit oxidation. However, these synthetic antioxidant have now been reported to be dangerous to humans so the search for non-toxic natural anti-oxidants have intensified in the recent years. The current review highlights the potential application of natural anti-oxidants.

Key words: Natural anti-oxidants, Reactive Oxygen Species (ROS), BHT, BHA.

TPV16/PP/042

NANOEMULSION IN ENCHACEMENT OF BIOAVAILABILITY OF POORLY SOLUBLE DRUGES: A REVIEW

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ABSTRACT

Nanoemulsions have the potential in pharmaceutical industries because of the transparency at high droplet volume fraction, higher rate of bioavailability or diffusion and increased shelf life of the pharmaceuticals. Nanoemulsions are clear, thermodynamically stable, isotropic liquid mixtures of oil, water, surfactant and co-surfactant. These are oil-in-water (o/w) type of emulsions with the average droplet size ranging from 5nm to 100 nm. Reduction in droplet size to nanoscale leads to change in physical properties such as optical transparency & unusual elastic behavior. Nanoemulsions have widespread applications in different fields such as pharmaceutics, food technology. Nanoemulsion offers a promising vehicle for increasing the aqueous solubility of poorly water-soluble drugs. Nanoemulsions have many advantages; for instance, enhance drug solubility, perfect thermodynamic stability, ease of manufacturing and permeation over conventional formulations that convert them to important drug delivery systems. The design & development of nanoemulsions aimed at controlling or improving required bioavailability levels of therapeutic agents. This review mainly discussed about the importance of nanoemulsions over other dosage forms, preparation methods, characterization of nanoemulsions and applications.

Keywords: Nanoemulsion, Poorly soluble drug, Method of preparation, Characterization, Application in drug delivery.

TPV16/PP/043

A SOLID DISPERSION- A REVIEW

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ABSTRACT

Solid dispersion is an effective way of improving the dissolution rate of poorly water soluble drugs and hence its bioavailability. The water soluble carriers used in preparation of solid dispersion enhance the dissolution rate of poorly water soluble drug. The review article focus on the method of preparation, classification, advantages, disadvantages and characterization of the solid dispersion.

KEYWORDS: Solid dispersion, poorly water soluble drugs.

TPV16/PP/044

THERAPEUTIC POTENTIAL OF BROCCOLI

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ABSTRACT

Broccoli is an edible green plant in the cabbage family obtained from the species of Brassica oleracea. The present review comprises the phytochemical and therapeutic potential of broccoli. The aim of this review is to collect results obtained from various studies in order to spot more light towards the surprising green world of broccoli. An extensive survey of literature revealed that broccoli is a good source of health promoting compounds such as glucosinolates, flavonoids, hydroxyl cinnamic acids and vitamins. Glucosinolates are found to have detrimental activity against various types of cancer such as breast, lung and colon. The intact glucosinolates were separated by cold maceration and the fractions were separated using column, TLC and paper chromatography. Moreover, broccoli has so many applications including gastroprotective, antimicrobial, antioxidant, anticancer, hepatoprotective, cardioprotective, anti-obesity and anti-diabetic activities.

Key words: Broccoli; cancer;glucosinolates

TPV16/PP/045

ANTI INFLAMMATORY ACTIVITY OF ZEA MAYS (CORN SILK)

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ABSTRACT

Plant materials have been used as medicine for a wide varity of human ailments due to increase cost of treatments, side effects of several allopathic drugs and development of resistance to currently used drug for infectious disease. In this study one of such medicinal plant is Cornsilk and study on this plant is necessary because the medicinal use of this plant have not been fully ascertained in all dimensions, in Chinese medicine it is mainly used in urinary tract infection and kidney stone in adult. . Cornsilk (Zea Mays) is an herbal remedy made from stigmas, the yellowish thread-like strands found inside the husks of corn. Cornsilk is used to treat urinary tract infections and kidney stones in adults. Cornsilk also served as a remedy for heart trouble, jaundice, malaria, and obesity.

KEYWORDS: Corn silk, obesity, malaria.

TPV16/PP/046

METHOD OF PREPARATION OF NANOPARTICLES

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ABSTRACT

Particles having diameter in range between 10-1000 nm are known as Nanoparticles. They are used as targeted delivery system for delivery of small and large molecules by changing their pharmacodyanmic and pharmacokinetic properties. They are not new to the environment as their existence had been found since long time for e.g. Pollutant in air but they had been studied and formulated for various beneficial purposes such as drug delivery, tissue targeting, cancer treatment, diagnostic agent and for imaging purpose. They had been prepared from different polymer which extent the therapeutic effect as well as reduces side effect. This review discussed about various methods of preparation, their characterization techniques, such as drug loading, release and the applications of Nanoparticles along with some marketed products.

TPV16/PP/047

NATURAL MOSQUITO REPELLENT COIL

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ABSTRACT

Due to Lack of knowledge regarding the toxic effects of synthetic compound in mosquito repellents, synthetic mosquito repellents are widely used. The prolong use of synthetic mosquito repellents shows many side effects like neurotoxic hazards, immunotoxic hazards, skin allergy, seizures, eye irritation, insomnia, impaired cognitive function, cough, sneezing, headache, asthma, bronchial irritation, itching, ear, nose and throat pain, dermatitis, reproductive dysfunction, development impairment and cancer, death. Synthetic mosquito repellents contain very toxic compounds such as DEET, picaridin, permethrin, P? Menthane? 3, 8? diol (PMD) etc. These draw backs created a pathway for herbal mosquito repellents coil. These natural mosquito repellents are derived exclusively from herbal extracts and natural oils, which repel mosquitoes and other household insects. They work by acting as an irritant when mosquitoes come in contact. Large numbers of herbal drugs are used in these mosquito repellents like Neem, Vekhand, Tulsi, Ajowan, Raal, etc along with other natural ingredients. The efforts are made to study the traditional beliefs from scientific approach. The main aim of this product development is to provide employment to the rural youth and to promote the use of herbal mosquito repellent coil as complete safe alternate of chemical repellents.

Keywords: Repellents, immunotoxic, vekhand, ajowan

TPV16/PP/048

REVIEW OF EFFECT OF CITRUS AURANTIUM ON BLOOD PRESSURE AND HEART RATE IN HUMANS

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ABSTRACT

Cirtusaurantium (bitter orange) consists of primary protoalkaloid p-synephrine. p-synephrine in combination with caffeine and polyphenols they are designed to promote thermogenesis and increase metabolism, suppress appetite and slow the absorption of fats and carbohydrates. p-synephrine has the structural similarity with norepinephrine and ephedrine. This review highlights the effects of acute administration of the combination of the phytomolecules caffeine, p-synephrine and polyphenols from green tea on heart rate and blood pressure in human subjects.

Key words : Cirtusaurantium, protoalkaloid p-synephrine, caffeine, polyphenols, heart rate, blood pressure

TPV16/PP/049

PERCEPTION ON AUTHENTICATION OF ISM HERBAL MEDICINES BY DNA FINGERPRINTS

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ABSTRACT

According to the regulatory authorities, the standardization of ISM preparations suggest macroscopic, microscopic, physical and chemical evaluation by TLC, HPTLC and HPLC methods. However, these methods have limitations because of the composition and relative amount of chemicals in a particular species of plants. The safety and quality assurance of ISM herbal medicines is a biggest lacuna. Based on the above said concept the present review focusses on authentication of ISM herbal medicine by DNA fingerprint methods. Since DNA is more stable and does not vary seasonally and with age of the plant. DNA fingerprinting differenciates with individual species and it is used to identify different adultrants. DNA based tools for authentication of medicinal plants is an evolving new pharmaceutical measures in quality control and quality assurance aspects.

Key words: ISM preparations, DNA fingerprinting, Authentication, DNA based tools.

TPV16/PP/050

IN-VITRO ANTI-INFLAMMATORY ACTIVITY OF SIMAROUBA GLAUCA DC

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ABSTRACT

The objective of the present study was to determine the in-vitro anti-inflammatory activity of aqueous extract of Simaroubaglauca . The invitroanti inflammatory activity of aqueous extract of Simaroubaglauca was determined by human red blood cell membrane stabilization method and egg albumin denaturation method. Aspirin was the standard drug used. Aqueous extract of Simaroubaglauca and aspirin were taken at the dose of 100, 200, 400, 600, 800, 1000µg/ml. Both extract of Simaroubaglaucaand aspirin showed a dose dependent increase in percentage inhibition of hemolysis and heat induced protein denaturation. This suggests that Simaroubaglauca may have potent antiinflammatory activity.

Key Word: inflammation, stabilization, protein denaturation.

TPV16/PP/051

REVIEW ON HERBAL OPTHALMIC FORMULATION IN THE PREVENTION OF CATARACT

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ABSTRACT

This review highlights herbal ophthalmic composition containing aqueous extract of Ocimum sanctum and Curcuma longa on its activity against cataract. Curcuma longa aqueous extract 0.01to 10% w/v and Ocimum sanctum 0.25% is added with viscoelastic substance. The onset and progression of galactose cataract was delayed significantly by instillation of one eyedrop two times per day as compare to control in the selected human volunteers. This data mining conclude that the herbal plant extract Ocimum sanctum and Curcuma longa will be used in the treatment of cataract.

Key words : Herbal ophthalmic composition, Ocimum sanctum, Curcuma longa, Cataract

TPV16/PP/052

PHARMACEUTICAL NANOSUSPENSION: PREPARATION, CHARACTERIZATION, AND APPLICATION

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ABSTRACT

Many of the new chemical entities (approximately 40% or more) being developed through drug discovery programmers are poorly water soluble. However, there are number of formulation approaches that can be used to solve the problems associated with the low solubility and low bioavailability of class II drugs. Recently, nanosuspensions have revealed their potential to undertake the problems associated with delivery of poorly water soluble and lipid soluble drugs and are unique because of their simplicity. A pharmaceutical nanosuspension is defined as very finely dispersed solid drug particles in an aqueous vehicle for either oral and topical use or parenteral and pulmonary administration. This review article mainly focuses on preparation of nanosuspensions by various techniques with their advantages and disadvantages, formulation considerations, characterization and their applications in drug delivery.

Key Words: Different preparation Techniques, Advantages, Disadvantages, Formulation considerations, Characterization, Applications in drug delivery.

TPV16/PP/053

PYRIMIDINE AND ITS BIOLOGICAL ACTIVITY: A REVIEW

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ABSTRACT

Pyrimidine is a heterocyclic aromatic organic compound containing two nitrogen atoms at positions 1 and 3 of the six- member ring shows wide range of biological activities including Anti-tubercular, Anti-bacterial, Anti-fungal, Anti-viral, Anti-inflammatory, Anti-malarial activity, Anti-cancer and Anti-neoplastic activity, Anti-HIV activity. The present review gives a brief detail on the biological activity and significance of pyrimidine compounds.

KEY WORDS: Pyrimidine, Biological activity, Significance.

TPV16/PP/054

FLAVANOIDS AND ITS PHARMACOLOGICAL ACTIVITIES : A REVIEW

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ABSTRACT

Flavonoids belong to a group of polyphenoliccompounds , which are classified as flavones, flavanones, catechins, anthocyanins. Flavanoids of different classes have several pharmacological activities such as anti-atherosclerotic , anti-inflammatory, anti-thrombogenic, anti- tumor, anti-osteoporotic, anti-viral, anti- bacterial, anti- fungal. In the view of their wide pharmacological and biological actions, they seem to have great therapeutic potential.

KEY WORDS: Flavanoids, Pharmacologicalactivity, Therapeutic potential.

TPV16/PP/055

PATHOPHYSIOLOGY AND PHARMACOTHERAPEUTICS OF DEMENTIA

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ABSTRACT

Alzheimer's disease is characterised by loss of neurons synapses in the cerebral cortex and certain subcortical regions. This loss results in gross atrophy of the affected regions, including degeneration in the temporal lobe and parietal lobe, and parts of the frontal cortex and cingulate gyrus. In Alzheimer's disease, an unknown process causes amyloid precursor protein to be divided into smaller fragments by enzymes through proteolysis. One of these fragments gives rise to fibrils of beta-amyloid, which form clumps that deposit outside neurons in dense formations know as senile plaques. Electron microscopy of these structures shows that they consist of paired helical filaments (PHFs) combining 10 nm diameter single filaments entangled at an interval of 80 nm. The oared helical filaments are composed of abnormally phosphorylated, tau proteins changes in tau proteins leads to the disintegration of microtubules in brain cells. The tau proteins are microtubule- binding proteins, which contribute to the stabilization of the cytoskeleton by binding with the microtubules when the tau proteins are highly phosphorylated; they lose the ability of binding to microtubules, resulting accumulation and aggregation of phosphorylated tau in neurons. In this paper path physiology and pharmacotherapeutics will be discussed in detail.

EFFECT OF PHOSPHOLIPASE A2 – AN INHIBITORY PEPTIDE ON ETIOPATHOLOG OF VARIOUS DISEASES

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ABSTRACT

Phospholipase A2 (PLA2) plays a crucial role in the number of diverse cellular responses, including phospholipid digestion and metabolism, host defense and signal transduction and they also provide precursors for eicosoniod generation. Many PLA2 inhibitors originally designed to be selective for a specific PLA2 isoforms have been found subsequentlly to inhibit more than one form as new information about specific PLA2 isoforms is discovered. Additionally, and more importanatly, development of the newer specific inhibitors of PLA2 isoforms has come to emergence. The best characterised specific PLA2 inhibitor to date is 3-(3-acetamide-1-benzyl-2-ethylindolyly-5-oxy) propane sulfonic acid (LY311727). At low nanomolecular concentrations, this inhibits binds and inhibits both group IIA specific PLA2 and group V SPLA2 , but does not inhibit group 1 specific PLA2. LY3111727 resides in the hydrophobic channel of Spla2, resulting in structural changes in the channel to accommodate the inhibitor, and interacts directly with the active site. Another family of compounds that are selective for Spla2 has at least two fatty moieties and contain atleast one unsaturated double bond. The first described inhibitor in this group was PGBx, a prostaglandin oligomer, which was found to inhibit specific PLA2 activity to block release of archidonic acid from human neutrophils. Subsequently, a related compound, PX-52, a fatty acid polymer, was found to inhibit a variety of specific PLA2 isoforms.

KEY WORDS: phospholipase A2, eicosoniod, inhibitory peptide

TPV16/PP/057

THIAZOLIDINE DIONE & ANTIPROLIFERATIVE ACITIVITY - REVIEW

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ABSTRACT

Thiazolidinedione is considered as a biologically important active scaffold with pharmacological activities such as Antifungal, Antitubercular, Antimicrobial, Antioxidant, Antibacterial, Cytotoxic, Anti-inflammatory, Analgesic, Antidepressant, Trypanocidal (anti-epimastigote) activity, Antidiabetic activity, Antiarrhythmic, FSH receptor agonist, Muscarinic receptor 1 agonist, Anticonvulsant, Antiviral/anti-HIV activity, Anti YFV (yellow fever virus). Though several activities have been carried out but drugs for cancer treatment are still under process .The present article gives a brief review on the update of various thiazolidinedione derivatives designed for anticancer activity.

TPV16/PP/058

IN-VITRO ANTIMITOTIC ACTIVITY OFSIMAROUBAGLAUCA DC

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ABSTRACT

The aim of present study was to determine the in-vitro antimioticactivity of aqueous extract of Simaroubaglauca leaves. Antimiotic activity was determined in meristamatic root tips of three plants namely Helianthus annus,CucumissativasandAlliumcepa.Methotrexate was used as control. At 25% concentration of aqueous extract of Simaroubaglauca leaves the percentage mitotic index values were 30.23 %, 31.87 %, 30.71% respectively on the root tips of Helianthus annus, CucumissativasandAllium cepa. The meristamatic cells of root tips of all the three plants showed dose depended decrease in mitotic index indicating antimitotic activity. Thus the results of the study are suggestive of promising cytotoxic activity of Simaroubaglauca.

Key Words: cytotoxic, mitosis.

TPV16/PP/059

IN-VITRO ANTICANCER ACTIVITY OF SIMAROUBA GLAUCA DC

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ABSTRACT

The aim of present study was to determine the anticancer activity of aqueous extract and methanolic extract of Simaroubaglauca leaves. The invitro anticancer activity was determined using Dalton's ascites lymphoma (DAL) and Ehrilch's ascites carcinoma(EAC) cell lines using dye inclusion and dye exclusion methods. At 200µg/ml aqueous extract of Simaroubaglauca showed 24% inhibition in EAC cell lines and 16% inhibition in DAL cell line.At 200µg/ml methanolic extract of Simaroubaglauca extract showed 40% inhibition by EAC cell lines and 27% inhibition by DAL cell lines. CC_{50} of aqueous extract of Simaroubaglauca extract was found to be 416.6µg and 625µg on DAL and EAC cell lines respectively. CC_{50}ofmethanolic extract of Simaroubaglauca extract was found to be 250µg/ml and 312µg/ml on DAL and EAC cell lines respectively.Themethanolic extract of Simaroubaglaucashowed greater cytotoxic activity on DAL and EAC cell lines when compared to aqueous extract of Simaroubaglauca.Thus the results of the study are suggestive of promising anti-cancer activity of Simarouba glauca.

Key Words: cytotoxic, anti –cancer.

TPV16/PP/060

MICROPARTICLES: PREPARATION AND APPLICATION

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ABSTRACT

Microparticulate drug delivery system is one of the processes to provide the sustained and controlled delivery of drug to long periods of time. They are small particles of solids or small droplets of liquids surrounded by walls of natural & synthetic polymer films of varying thickness and degree of permeability acting as a release rate controlling substance. Microparticles are defined as particulate dispersions or solid particles with a size in the range of 1 µm -1000µm. The drug is dissolved, entrapped, encapsulated or attached to a microparticles matrix. Depending upon the method of preparation, microparticles, microspheres or microcapsules can be obtained. This microencapsulation technology allows protection of drug from the environment, stabilization of sensitive drug substances, elimination of incompatibilities, or masking of unpleasant taste. Hence,they play an important role as drug delivery systems aiming at improved bioavailability of conventional drugs and minimizing side effects. The present review highlights several carriers used in the preparation of microparticles, preparation methods of microparticles, their release mechanisms, evaluation parameters, their advantages and applications.

KEY WORDS: Preparation methods, Release mechanisms, Evaluation parameters, Advantages, Applications.

TPV16/PP/061

BROWN Vs WHITE – A PHARMACOLOGICAL ANALYSIS

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ABSTRACT

INTRODUCTION:A lot has been researched and written about the goodness of brown bread, brown rice, brown sugar and brown eggs. White foods stay a craze to many. METHODOLOGY: Nearly 5 commonly used brown and white foods were chosen (bread, rice sugar egg and chicken) and their method of processing and manufacturing were analysed. OBJECTIVE: To elucidate the type of harmful chemicals used in the processing and manufacturing of the products. RESULTS: Brown rice comprises of whole grain, meaning the husk also remains intact, while in white rice the husk is removed and then it is polished to give a smooth and whitish appearance. Brown sugar is brown because of the presence of molasses. It is then bleached to remove the molasses to result in pure white sugar. It is commonly believed that brown eggs are more nutritious than white eggs, but it has been verified through several researches that there is no real nutritional difference between them.Whole wheat atta over maida does have more manganese, selenium and magnesium. White chickens are broiler chickens which are caged and given antibiotics and artificial feeds to grow them in size, whereas brown is natural cage free and thus healthy.CONCLUSION: Brown foods are healthier than white foods.

TPV16/PP/062

ROLE OF NEUTRACEUTICALS IN VARIOUS DISEASES

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ABSTRACT

Nutraceuticals have received considerable interest because of their presumed safety and potential nutritional and therapeutic effects. In recent years there is a growing interest in Nutraceuticals which provide health benefits and are alternative to modern medicine. By using Nutraceuticals, it may be possible to reduce or eliminate the need for conventional medications, reducing the chances of any adverse effect. Nutraceuticals often possess unique chemical actions that are unavailable in pharmaceuticals. The entire world is fighting against diseases characteristic of the modern age such as obesity, osteoporosis, cancer, diabetes, allergies and dental problems. Nutrients, herbals and dietary supplements are major constituents of Nutraceuticals which make them instrumental in maintaining health, act against various disease conditions and thus promote the quality of life. Using food products to promote health and cure disease is rentheir crude form. owned. Currently most of the drug molecules available in the herbal formulations were anciently used.

Keywords: Nutrient, Disease and treatments, Future food, Medicine.

TPV16/PP/063

A REVIEW ON APPLICATION AND PROSPECTIVE OF NANODIAMONDS

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ABSTRACT

With the rapid development of nanoscience and nanotechnology, a wide variety of nanomaterials have been synthesized and discovered. Revolutionary particles called nanodiamonds (NDs) have been considered for use in several medical applications due to its unique mechanical, chemical, optical and biological properties. It has also sensing , imaging, and drug delivery properties. The study associated with the interface between ND and life sciences which is important for development of effective drug delivery systems.

Key words: Nanotechnology, nanomaterial, nanodiamond, drug delivery system.

TPV16/PP/064

MICROEMULSIONS : PREPARATION AND CHARACTERIZATION

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ABSTRACT

The design and development of new drug delivery system with the intention of enhancing the efficacy of existing of drug is an ongoing process in pharmaceutical research. Since there are many types of drug delivery systems that have been developed, one in particular the colloidal drugs delivery system has great potential for achieving the goal in drug targeting. In recent years, the microemulsions is a good candidate for oral delivery of poorly water-soluble drugs because of its ability to improve drug solubilization. Microemulsions are clear, stable, isotropic liquid mixtures of oil, water and surfactant, frequently in combination with a cosurfactants. These systems have advantages over conventional emulsions in that they are thermodynamically stable liquid systems and are spontaneously formed. Also these systems offer several benefits for oral administration, including increased absorption, improved clinical potency and decreased toxicity. This review is aimed to discuss the preparation, advantages, disadvantages, evaluation and factors affecting the microemulsions.

KEYWORDS: Microemulsions, Advantages, Disadvantages, Evaluation, Factors affecting the microemulsions

ANTIMICROBIAL EVALUATION OF SOME QUINAZOLINE BASED MANNICH BASES

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ABSTRACT

Quinazoline possess a broad spectrum of biological and pharmacological activities. Quinazoline -4(3H)-one substituted at third position with heterocyclic moieties are beneficial to bacterial activities. Mannich base have been explored in the area of antibacterial and antifungal drugs. Various mannich bases have been shown antimicrobial activity. In a view of the antibacterial property of quinazoline moiety and mannich bases. It is envisaged that the combined effects of all entities will result in increased antimicrobial activity. A series of mannich bases containing quinazoline nucleus were synthesized from anthranilic acid and formamide. Mannich reaction in the presence of formaldehyde and various aromatic amines. The compounds are characterized by IR and screened for antimicrobial activity by cup plate method. All the synthesized compounds shows characteristic absorption peak in IR spectra and significant antibacterial activity against gram negative organism and the compounds were further evaluated for various biological activities.

TPV16/PP/066

REVIEW ON CELASTRUS PANICULATUS (CELASTRECEAE) ETHANOBOTANICAL AND TRADITIONAL USES.

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ABSTRACT

Celastruspaniculatus (CELASTRCEAE) is an Indian medicinal plant which has been used for thousands of years in the traditional system of medicine. Oil which obtained from the seeds of celastruspaniculatus is reported for its stimulating effects on memory. It is used as nervine tonic, as a rejuvenator and as an anti depressant. Celastruspaniculatushas the potential role in the management of neuro degenerative disease and other neuronal disorders such as Alzheimers disease. It is a powerful stimulant for neuromuscular system used for the treatment of rheumatism, gout and paralysis. This review aims at exploring the detailed phytochemical composition, pharmacological properties as well as therapeutic applications of different parts ofC.paniculatus.

KEYWORDS: Celastruspaniculatus, nervine tonic, anti-oxidant, phytochemicals, therapeutic properties

TPV16/PP/067

REVIEW ON BROWN MARINE ALGAE STOECHEOSPERMUM MARGINATUM

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ABSTRACT

Marine organisms are a rich source of structurally new and biologically active metabolites. There have been many reports of macro algae-derived compounds that posses a broad range of biological functions, such as antibiotic, antiviral, antioxidant, anti-inflammatory, cytotoxic, and antimitotic activities. Bioactive components have been revealed in many marine algae. Marine algal compounds are predominantly found with diverse functional groups and hence have different properties. Based on the above said concept data mining was done on the brown marine algae Stoecheospermum marginatum , the studies such as microscopic evaluation, preliminaryphytochemical analysis, antimicrobial activity, anti oxidant activity, apoptotis studies via ROS induced mitochondrial mediated caspase dependent pathway in murine B16F10 melanoma cells were evaluated Antifungal activity and anticancer activity were reported. This review will provide Compiled data for the researchers about the brown algae stoecheospermum marginatum.

Keywords: Stoecheospermum marginatum , brown algae, Apoptotic studies and caspase.

TPV16/PP/068

OSMOTIC PUMP DRUG DELIVERY SYSTEM: A NOVAL APPROACH

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ABSTRACT

Conventional drug delivery systems have little control over their drug release and almost no control over the effective concentration at the target site. The major problem associated with conventional drug delivery system is unpredictable plasma concentrations. Controlled drug delivery systems offer spatial control over the drug release. Osmotic pumps are most promising systems for controlled drug delivery. These systems are used for both oral administration and implantation. Osmotic pump uses the basic principle of osmosis for release of drug(s). Osmotic pumps consist of an inner core containing drug and osmogens, coated with a semi permeable membrane. As the core absorbs water, it expands in volume, which pushes the drug solution out through the delivery ports. Osmotic pumps release drug at a rate that is independent of the pH and hydrodynamics of the dissolution medium. Various patents available for osmotic drug delivery system like Rose-Nelson pump, Higuchi-leeper pump, higuchi-theeuwes pump and elementary osmotic pump.

Keywords: Osmosis, component of osmotic system, Osmotic pump.

TPV16/PP/069

GASTRO RETENTIVE DRUG DELIVERY TECHNOLOGIES (CURRENT APPROACHES AND FUTURE POTENTIAL)

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ABSTRACT

Gastroretentive drug delivery system offers several advantages providing prolonged gastric retention which improves bioavailability, reduces drug wastage, useful for drugs acting orally in the GIT ,drugs which are poorly soluble and unstable in intestinal .Thus attracting interest of pharmaceutical formulation scientist for gastro retentive dosage form include floating system,mucoadhesion or bioadhestion ,sedimentation or high density, expansion,modified shape sysytem etc. This has triggered attention towards development of gastroretentive drug delivery technologies to deliver a narrow absorption windows. The present review addresses briefly about the current status of various leading gastroretentive drug delivery technologies, developed until now, i.e. High density (sinking), floating, bio- or mucoadhesive, expandable, unfoldable, super porous hydrogel, magnetic systems etc. In addition, important factors controlling gastro retention, advantages and finally, future potential are discussed.

Key words: Gastroretention; Floating dosage forms; Controlled oral delivery; Drug delivery systems.

IONTOPHORESIS TRANSDERMAL DRUG DELIVERY SYSTEM- A NOVEL APPROACH

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ABSTRACT

A recent approach to drug delivery is to deliver the drug into systemic circulation at predetermined rate using skin as a site of application. Transdermal drug delivery is one of the most promising methods for drug application. The success of Transdermal therapeutic system has created much interest in the pharmaceutical industry and has activated research activities related to it. Transdermal delivery has many advantages over conventional modes of drug administration, it avoids hepatic first pass metabolism, potentially decreases side effects and improves patient compliance. Drug delivery with Transdermal patch systems exhibit slow, controlled drug release and absorption. The plasma drug concentration does not vary significantly over time. Development of iontophoretic system is a breakthrough in this field designed to improve the delivery rate of ionic compounds. This technique generates an electrical potential gradient that facilitates the movement of solute ions across the membrane. Moreover with the advent of more sophisticated techniques available for the production of recombinant proteins and peptides, there is an ever-increasing demand of novel delivery systems that could effectively deliver these ionic species at the specific site. Iontophoresis seems to be an ideal candidate to sort out the limitations associated with the delivery of ionic drugs. In this review, efforts have been made to summarize all the aspects of iontophoretic delivery including history, types and various factors affecting the drug delivery .The iontophoretic delivery of macromolecules will open the doors to non-invasive transdermal delivery of peptide-based pharmaceuticals, following the advances in recombinant DNA technology, which are the wonder drugs of tomorrow.

KEY WORDS: Transdermal drug delivery, iontophoresis

IMPLANTABLE DRUG DELIVERY SYSTEM: A REVIEW

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ABSTRACT

In the past, drugs were frequently administered orally, as liquids or in powder forms. To avoid problems incurred through the utilization of the oral route of drug administration, new dosage forms containing the drug(s) were introduced. As time progressed, there was a need for delivery systems that could maintain a steady release of drug to the specific site of action. Therefore, drug delivery systems were developed to optimize the therapeutic properties of drug products and render them more safe, effective, and reliable. Implantable drug delivery systems (IDDS) are an example of such systems available for therapeutic use. The study of currently available implantable drug delivery systems is the main focus of this review. The major advantages of these systems contain targeted local delivery of drugs at a constant rate, fewer drugs required to treat the disease state, minimization of probable side effects, and better efficacy of treatment. Due to the development of such sustained release formulations, it is now possible to administer unstable drugs once a week to once a year that in the past required frequent daily dosing. Preliminary studies using these systems have shown superior effectiveness over conventional methods of treatment. However, one limitation of these newly developed drug delivery systems is the fact that their cost-to-benefit ratio (cost/benefit) is too high which restricts their use over conventional dosage forms. Some of the most recently discovered implants are in the early developmental stages and more rigorous clinical testing is required prior to their use in standard practice.

KEYWORDS: Implantable drug delivery, modulated drug delivery, implants, drug delivery systems, implantable pumps, recent technologies.

TPV16/PP/072

ENHANCED BIOAVAILABILITY VIA EXTENDED GASTRIC RETENTION

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ABSTRACT

The ability to prolong gastric residence times with the use of gastric retentive systems is particularly useful for drugs that act locally in the stomach and for those having site-specific absorptions in the upper intestine. Drugs entrapped into these dosage forms also display pharmacokinetic parameters that favor greater safety and efficacy. Many gastric retentive platforms have been studied and some have successfully been utilized in marketed drug products. There are typically three approaches that these platforms take to reside in the stomach longer. They alter the size, density, or adhesion of the delivery system in the gastric environment which leads to changes in drug liberation and absorption. This has a direct effect on the therapeutic effectiveness of the drug they are carrying. The development of these dosage forms is not however without its challenges and further research in this area is needed that shows true gastric retention has occurred. The purpose of this paper is to briefly describe gastric retention approaches and to highlight the enhanced bioavailability, safety, and other benefits of these formulations.

Keywords: Gastric retention; Oral controlled release; Drug delivery systems; Gastro retentive technologies

PHARMACOGNOSTICAL, PHYTOCHEMICAL AND A COMPARATIVE PHARMACOLOGICAL EVALUATION OF VOLATILE OIL AND FIXED OIL ISOLATED FROM SEEDS OF *Brassica nigra* (BRASSICACEAE)

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ABSTRACT

The present study deals with phytopharmacological evaluation of volatile oil and fixed oil isolated from seeds of Brassica nigra (Brassicaceae). The cultivated source of this plant was collected, authenticated by a taxonomist and pharmacognostic evaluation such as macroscopy, microscopy, fluorescence powdered analysis; physio-chemical constants were done as a botanical way of standardization. Preliminary phytochemical screening reveals the presence of proteins, carbohydrates, alkaloids, amino acids, glycosides, and saponins. Further the isolated volatile and fixed oil are subjected to GC-MS studies to find out the exact phytomolecule structure and their formula. From the GC-MS instruments analysis, it was confirmed that the volatile oil consist of sinigrin ($C_{10}H_{18}NS_2O_{10}$) and the fixed oil consists of stearic acid ($C_{18}H_{36}O_2$), lignoceric acid ($C_{24}H_{48}O_2$), myristic acid ($C_{14}H_{28}O_2$). This kind of identification might be valuable to lay down the pharmacopoeial standards of herbal drugs. A descriptive pre-clinical study of two different oils of seeds of Brassica nigra on carrageenan induced rat paw edema was tested. The result obtained was analyzed statistically by student t-test. A statistically significant ($p<0.001$) anti-inflammatory activity was observed in10%v/v of volatile oil and it was comparatively better than 10%v/v of fixed oils from the seeds of Brassica nigra. From this data, it was confirmed that the folkloric traditional uses of oils of seeds of Brassica nigra and the presence of sinigrin in volatile oil may be developed as a potential lead to combat the inflammatory disorders.

Key Words: Brassica nigra, GC-MS, Anti-inflammatory activity, Sinigrin

TPV16/PP/074

SOLUBILITY ENHANCEMENT BY VARIOUS TECHNIQUES AN OVERVIEW

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ABSTRACT

Solubility is not to be confused with the ability to dissolve or liquefy a substance, since this process may occur not only because of dissolution but also because of a chemical reaction. Low aqueous solubility is the major problem encountered with formulation development of new chemical entities as well as for the generic development. Among all newly discovered chemical entities about 40% drugs are lipophilic and fail to reach therapeutic range due to their poor water solubility. Drug with poor water solubility cause slow dissolution rates, generally show erratic and incomplete absorption leading to low bioavailability when administered orally .The solubility behavior of drug is the major challenge for formulation scientist. The present review is devoted to increase the solubility of poorly water soluble drugs. Hence various techniques are used for the improvement of the solubility of poorly water-soluble drugs include micronization, chemical modification, pH adjustment, solid dispersion, complexation, co-solvency, micellar solubilization, hydrotropy etc. The purpose of this review article is to describe the techniques of solubilizaton for the attainment of effective absorption and improved bioavailability.

KEY WORDS: Bioavailability, Novel methods, Solubility, Solubility enhancement

STUDY OF NEBULIZATION WITH HYPERTONIC SALINE AND OTHER NEBULIZING AGENTS WITH OR WITH OUT ANTIBIOTICS IN BRONCHIOLITIS PATIENTS AGED 2 MONTHS TO 2 YEARS ADMITTED IN RMMCH

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ABSTRACT

Bronchiolitis is an acute lower respiratory tract infection that occurs in children younger than two years old. It is generally a self-limiting condition usually caused by virus. Based on this a cross-sectional prospective observational study performed in Department of Paediatrics, at RMMCH, Annamalai University, TamilNadu, period of study 6 months; Between November 2015 and April 2016. Totally 81 patients in paediatrics ward with bronchiolitis who satisfy the inclusion and exclusion criteria were enrolled. The objective of this study is to observe the action of nebulization agents and antibiotics used in treatment of Bronchiolitis, to observe the effective nebulizing agents to get expected outcomes, to observe the mean length of stay in hospital. Our study shows that male patients and patients of age > 2 months -6 months were affected mostly with bronchiolitis. Almost 65% had risk factors due to seasonal changes, environmental changes-dust, and aspiration of milk. The major antibiotics prescribed came under the category of broad spectrum penicillin's, among this amoxicillin-clavulanic acid was the most common antibiotic prescribed for age group > 2 months to 1 year. 62 patients were treated with other nebulizing agents like bronchodilators, corticosteroids and decongestant. Among these 40 patients were treated with hypertonic saline with single nebulizing agents. Combination therapy includes hypertonic saline with Dual nebulising agents- 20 patients and Triple nebulising agents- 2 patients. The mean length of stay in hospital was 5-6 days.

TPV16/PP/076

VALIDATED ANALYTICAL METHODS FOR ESLICARBAZEPINE ACETATE: A REVIEW

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Abstract

Eslicarbazepine Acetate is abbreviated as ESL. It is an Anticonvulsant drug that is approved for use in Europe and United States as monotherapy or adjunctive therapy for partial onset seizures. Epilepsy is also called as seizure disorder. More than 1 million cases per year are reported in India. Seizures cannot be cured but treatment may help. In which ESL plays a major role. ESL is a prodrug to (Es)licarbazepine. ESL systemic (IUPAC) name is (S)-10-Acetoxy-10,11-dihydro5H-dibenz(b,f)azepine-5-carboxamide. The trade names of ESL are Aptiom, Zebinix. It is administered by oral route. It stabilizes the inactive state of voltage gated sodium channels that allows less sodium to enter neural cells which leaves them less excitable. This review covers a time period from 2007 to 2016 during which 13 analytical methods including Spectroscopic and Chromatographic method were reported. Spectroscopic and Chromatographic methods including HPLC/LC, LC-MS-MS and FT-IR Spectrophotometric methods were reported. The developed LC-MS-MS methods mentioned in the above texts were rapid and sensitive, but not economical. RP-HPLC methods reported were far more economical, rapid and sensitive for the estimation of ESL and their metabolites in pharmaceuticals and biological samples. The application of these methods and determination of ESL in pharmaceutical dosage form is also been discussed.

Keywords: Eslicarbazepine acetate, HPLC, LC , LC-MS-MS , IR.

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STEM CELL THERAPHY IN DIABETES MELLITUS

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ABSTRACT

Diabetes Mellitus one of the top ten disease causes morbidity and mortality, affecting nearly 350 million people worldwide. Beta cell replacement represents an attractive prospect for diabetes therapy but treatment options remain quite limited. There is increasing hope placed on insulin producing cells derived from human pluripotent stem cells, even as the approach faces continued challenges. The most effective protocols thus far have produced cells that express insulin, and have molecular characteristics that closely resemble genuine insulin-secreting cells. However, these cells demonstrate little sensitivity to glucose – an issue that will hopefully be resolved in coming years. This attempt summarizes recent progress in obtaining cells that express insulin from different progenitor sources, and highlights the major pathways and genes involved in diabetic patients.

KEYWORDS: Diabetes , Beta cells, Insulin , Stem cells:

NOCHI KUDINEER - A SIDDHA MANAGEMENT FOR FEVER

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ABSTRACT

Siddha system is an ancient system which has rich herbal curatives and many of the preparations mentioned in the literatures are practiced in day today life in Southern India. One such simple preparation given in Siddha materia medica, medicinal plant division is Nochi kudineer indicated for murai suram which is intermittent fever. This classical text is reviewed for its antipyretic activity which eventually has the property of curing intermittent fever. Various phytochemical constituents present in leaves of Vitex negundo Linn. are potent antipyretic agents. Against these backdrops, this review was attempted to reveal the hidden treasure of Siddha literature regarding Nochi kudineer for fever through the scientific perspective for better understanding.

Keywords: Siddha, Nochi kudineer, Murai suram, Phytochemical constituents, Vitex negundo Linn.

EXPERIMENTAL DESIGN (CCD) TO DEVELOP A ROBUST HPTLC METHOD FOR QUANTIFICATION OF PHTHALATES IN COSMETIC PREPARATIONS

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ABSTRACT

A rapid, simple and economic HPTLC method for the simultaneous quantification of Phthalates (dimethyl phthalate (DMP), diethyl phthalate (DEP), di-n-butyl phthalate (DBP) in cosmetic preparations was developed and validated. Central Composite design (CCD) with three factors and one response was employed to study the robustness of the developed method. The developed method was examined for validation parameters like linearity, specificity, precision, accuracy and robustness. The method was found linear over a wide range of 2.0 – 200 ng/band for all the Phthalates respectively. The %RSD for Precision studies for all the Phthalates was found NMT 2 %. Accuracy, ascertained by employing % Recovery was calculated and found between 98-103 % w/w. CCD generated and carried out proves the method developed was robust. All the validation parameters were reported to be within the acceptance limit. The content of Phthalates in 30 different cosmetic preparations available in local markets in and around Chennai was ascertained. The proposed and developed HPTLC method was applied for routine analysis of DMP, DEP and DBP in cosmetic preparations and can also be extended to the analysis in pharmaceuticals and food products.

Keywords: Phthalates (dimethyl, diethyl and di-n- butyl phthalate), Central Composite design, HPTLC, Cosmetics preparations.

TPV16/PP/080

A REVIEW ON SELF-EMULSIFIED DRUG DELIVERY SYSTEM

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ABSTRACT

Improving oral bioavailability of low poorly water soluble drugs using self-emulsifying drug delivery systems (SEDDS) possess significant potential. Oral bioavailability of hydrophobic drugs can be improved using SEDDS, and appears most promising. These are defined as isotropic mixtures of natural or synthetic oils, solid or liquid surfactants or, alternatively, one or more hydrophilic solvents and cosolvents/ surfactants. The system being thermodynamically stable requires low energy emulsification which will be provided by GI fluid agitation.Their dispersion in gastro intestinal (GI) fluid after administration forms micro or nano emulsified drug which gets easily absorbed through lymphatic pathways bypassing the hepatic first pass metabolism. Parameters like surfactant concentration, oil to surfactant ratio, polarity of emulsion, droplet size and charge on droplet plays a critical role in oral absorption of drug from SEDDS. For hydrophobic drug substances that exhibit dissolution step as rate limiting for absorption, SEDDS offer an improvement in rate and extent of absorption and gives more reproducible plasma concentration time profiles. Use of combined in vitro dispersion and digestion methodologies has enabled a much improved understanding of role of intestinal lipid processing on solubilization behavior of lipid based drug delivery systems(LBDDS). The article gives a brief view on the solid lipid nanoparticles and its evaluation.

Keywords: Self-Emulsifying formulation, Lipid-based drug delivery systems, Characterization, Bioavailability enhancement.

ENHANCING THE DISSOLUTION RATE OF CALCIUM CHANNEL BLOCKER BY SOLID DISPERSION TECHNOLOGY

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ABSTRACT

Amlodipine besylate is a calcium channel blocker used in the treatment of hypertension which is practically insoluble in water. The aim of present study is to enhance dissolution rate of amlodipine besylate and to optimize the drug dissolution profile by modifying the carrier concentration. Poloxamer 407 and poloxamer 188 which are polyoxyethylene–polyoxypropylene copolymers, selected as carriers for preparing the solid dispersion by solvent evaporation method with different drug polymer ratios. The prepared solid dispersions were evaluated for physical state, drug:carrier interactions by X-ray diffraction, infrared spectroscopy, differential scanning calorimetry and scanning electron microscopy. From the dissolution studies it is confirmed that all solid dispersions showed increased dissolution rate when compared to pure amlodipine besylate. Among the two polymers used, poloxamer 407 was found to be better than poloxamer 188 in the enhancement of dissolution efficiency.

Keywords: Poloxamer 407, Poloxamer 188, Solid dispersion.

PH SENSITIVE NANOPARTICLES OF CAPECITABINE FOR TARGETED DRUG DELIVERY

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ABSTRACT

In majority cases conventional chemotherapy is leading to discontinuation of therapy due to severe side effects. Chitosan nanoparticles (CsNPs) have gained attention because of their outstanding physical and biological properties and considered as successful candidate for the controlled and targeted anticancer effect by their pH dependent drug releasing ability. Capecitabine (CTB) is widely used as major therapeutic agent for treating breast cancer, however its clinical efficiency in compromised by undesirable side effects coupled with resistance in cancer cells. CTB is incorporated in CsNPs by ionic gelation, with a specific aim to target CTB for site specific delivery. The aim of this study was to assess the feasibility of employing a novel formulation to encapsulate an anionic model drug Capecitabine into chitosan(Cs)-glutaraldehyde nanoparticles(NPs) for site specific delivery. The responses investigated were the entrapment efficiency, mean hydrodynamic particle size and zetapotential. Infrared spectral studies revealed that the drug and polymer are compatible. Four formulations were prepared by varying concentrations of chitosan and glutaraldehyde. All the formulations exhibited nearly same entrapment efficiency, but particle size varied significantly with a change in concentration of formulation variables. At low concentration of chitosan, low particle size was seen whereas, at high concentration of crosslinking agent may resulted increased crosslinking and particle size of 380nm. Among the formulation F2 exhibited a sustained drug release of 73% due to increased chitosan concentration.

Keywords: Capecitabine, Chitosan, Nanoparticles, Tumor-targeting.

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SOLID DISPERSION OF FELODIPINE FOR IMPROVING RATE OF DISSOLUTION

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ABSTRACT

Felodipine, BCS class II calcium channel blocker, is used in the treatment of hypertension and cardiac disorders. Low solubility of felodipine limits its bioavailability. The present study was carried to enhance the dissolution rate of the drug by solid dispersion technology. The solid dispersions were prepared by hot melt technique using PEG4000, PEG6000 and Poloxamer as carriers. The compatibility of the drug and polymers used was confirmed with FT-IR studies. The solid dispersions were prepared in 1:3 and 1:5 drug to polymer ratio. The prepared solid dispersions were analyzed for physical state, X-ray diffraction studies and scanning electron microscopy. The X-ray diffraction pattern of pure drug showed sharp intense peaks which is reduced in the solid dispersions confirming that the drug has changed from crystalline to amorphous form. The SEM images revealed that the drug and the carriers were homogenously mixed and devoid of crystalline particles. The dissolution studies revealed that all the solid dispersions showed an increased dissolution rate when compared to pure felodipine. The dissolution rate increased with an increase in the concentration of carrier molecule. Among the carrier molecules, poloxamer 407 showed highest dissolution rate. The tablets were formulated using poloxamer 407 solid dispersions. The results exhibited that poloxamer 407 SD based tablets gave a significantly higher release of felodipine when compared with control tablets.

Key words: Calcium channel blocker, Dissolution, Felodipine, Solid dispersion.

A QUESTIONNAIRE BASED SURVEY ON THE KNOWLEDGE, ATTITUDE AND PRACTICE (KAP) OF RATIONAL USE OF DRUGS AMONG PHARMACY STUDENTS

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ABSTRACT

Background: Rational use of Medicine (RUM) requires that "patients receive medications appropriate to their clinical needs, in doses that meet their own individual requirements for an adequate period of time, and at the lowest cost to them and their community."Aim: To evaluate the knowledge, attitude and practice of Rational use of medicines among pharmacy students.Methods: A pre-validated self developed questionnaire was surveyed on 100 Pharm D students. The statistical tests were performed using SPSS version 16 and the results are expressed as percentage and counts.Results: The awareness & knowledge of the entire student population on RUM was found to be 68.36%. Majority of the students were aware that cheaper drugs are as effective as costlier medicines (86%), not all the cough syrups are addictive (80%), antibiotics & antihypertensive medicines cannot be discontinued once symptoms disappear (78% & 80% respectively) and antacids to be chewed before swallowing for better effect (60%). Only 30% were aware of increased risk of osteoporosis with long-term corticosteroid use and 37% were aware that patients on warfarin therapy should reduce their vitamin k intake.Conclusion: Most of the students are well aware about the overall concept of RUM but in specific to therapy related precautions and adverse drug reactions, the response is considerably low. Proper education and training in these areas will further improve the awareness and implementation of RUM among the pharmacy students.

Key Words: KAP, pharmacy students, questionnaire based survey, rational drug use

TPV16/PP/085

CLINICAL TRAIL OVERVIEW

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ABSTRACT

Clinical data is one of the most valuable assets to a pharmaceutical company. Data is central to the whole clinical development process. It serves as basis for analysis, submission, and approval, labeling and marketing of a compound. Without good clinical data – well organized, easily accessible and properly cleaned - the value of a drug may not be fully realized. Clinical trials are conducted to collect data regarding the safety and efficacy of new drug and device development. A clinical trial is a research study that tests how well an intervention works in a group of people which tests for new methods of screening, prevention, diagnosis, or therapy is conducted in phases and during a trial, additional information is learned about an intervention, its risks, and its effectiveness and/or efficacy. Clinical trials test how well new approaches and interventions work in people .These approaches can be medical, behavioral, or management. A protocol is led by a principal investigator. The principal investigator is often a doctor. Members of the research team regularly monitor the participants' health to determine the study's safety and effectiveness and/or efficacy.The same protocol is used by every doctor or research center taking part in the trial. Drug development is a term used to define the entire process of bringing a new drug or device to the market. The phases include:
Phase I – Healthy Volunteers
Phase II – Target Patient Volunteers
Phase III – Larger Number of Patients
Phase IV – After marketing.

Keywords: Clinical trials, Drug discovery, Clinical phases

TPV16/PP/086

DEVELOPMENT AND CHARACTERZATION OF FELODIPINE TRANSDERMAL PATCHES

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ABSTRACT

Recent advances in drug delivery systems focuses to enhance safety and efficacy of drug molecule by formulating a suitable dosage form for effective therapy and to achieve better patient compliance. Felodipine, a BCS class II calcium channel blocker, is used in the management of hypertension and angina pectoris. Due to the poor solubility and low bio availability of the drug, there is a necessity to enhance the absorption and to achieve constant plasma concentration of felodipine for its maximum therapeutic utility. Delivery of felodipine by transdermal route would increase the bioavailability and patient compliance. In this study, matrix type transdermal patches were prepared using different combinations of hydrophilic polymer viz polyvinyl pyrollidone (PVP) and hydrophobic polymer viz ethyl cellulose (EC) by solvent evaporation technique. Polyvinyl alcohol was used as backing membrane for the film. All the formulations were evaluated for physical properties, in vitro drug release and in vitro drug permeation. The FTIR studies confirmed the compatibility between drug and the polymers. An increase in the concentration of PVP yielded patches with high moisture content. Hydrophilic nature of the polymers greatly influenced dissolution rate and drug permeation. The formulation with highest PVP concentration, F3, exhibited a maximum drug release of 96.23% for 24 hours and drug permeation was found to be76.83%. While the formulation with highest EC concentration, F5, exhibited only 74.45% drug release for 24 hours and 23.35% of drug was permeated at the end of 12 hours.

KEYWORDS: Felodipine, Permeation, Transdermal patches, solvent evaporation technique

VALIDATED HPTLC METHOD FOR ESTIMATION OF DANAZOL IN PHARMACEUTICAL DOSAGE FORM

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ABSTRACT

A simple, precise and accurate High Performance Thin Layer Chromatographic (HPTLC) method has been developed for the estimation of Danazol in pharmaceutical dosage form. Chromatographic separation was carried out on Merck TLC aluminum sheets of Silica gel 60 F254, (20 × 10 cm) with 250 µm thickness using Methanol : Water in the ratio 5.5 : 4.5 v/v as mobile phase. Following separation, densitometric analysis was carried out in absorbance mode at 277 nm. The R_f value of Danazol was observed at 0.57 ± 0.02. The developed method was validated in accordance to ICH guidelines. Accuracy and reliability of the method was assessed by evaluation of linearity over the concentration range of 80-120 ng/spot with a correlation coefficient (r^2) of 0.999. The limit of detection (LOD) and limit of quantification (LOQ) was found to be 0.0135 and 0.0409 ng/spot respectively, the % RSD for intra and inter-day precision was found to be 0.46 and 0.76 % respectively, and accuracy was assessed in terms of % recovery and was found to lie within the range of 99.85 – 101.07 % w/w. The high sensitivity, simplicity and selectivity of the proposed method suggest its applicability for routine quality-control analysis purposes of Danazol in their pharmaceutical preparations

TPV16/PP/088

FORMULATION AND EVALUATION OF COMBINATION DRUG LOADED NIOSOMES FOR DIABETES MELLITUS

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ABSTRACT

Niosomes are the highly ordered vesicular bilayer membrane made up of non-ionic surfactant with or without the incorporation of cholesterol and dicetyl phosphate. The closed bilayer vesicular structure of niosomes are formed by the self assembling of non-ionic surfactants in the presence of aqueous medium. In this work two anti-diabetic drugs namely vildagliptin and metformin are formed as niosomes and evaluated for drug entrapment, vesicular size, stability and in-vitro drug release compared with that of pure drug solution. The size of niosomal formulations ranges from microscopic to nanometric scale and most of the vesicles are found to be spherical in shape. The FTIR result shows that there is no change in chemical nature of the drug. The stability study reveals that it exhibits good stability at various temperature. The in-vitro drug release profile shows that niosomal formulation provides prolonged release of drug when compared to pure drug solution. Hence niosomal formulation offers a promising avenue to fulfill the need for an anti-diabetic drug. It can maintain, sustain and control the drug activity and also minimizing the frequency of drug administration with the patient compliants.

Keywords: Niosomes, Carrier, Drug delivery, anti- Diabetic drugs

BOERHAAVIA DIFFUSA –AN UNDERUTILIZED GREEN LEAFY VEGETABLE- A PHARMACOLOGICAL AID

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ABSTRACT

INTRODUCTION: There has been increased global interest in traditional medicine. Numerous nutraceutical combinations have entered the international market through exploration of ethnopharmacological claims made by different traditional practices. Boerhaavia diffusa is a tropical crawling root plant, with bioactive compounds in both the leaves and roots. Boerhaavia diffusa is an herb found in Ayurveda and other traditional medicines. Historically, Boerhaavia diffusa has been used for its anti-diabetic and diuretic properties.METHODOLOGY: The Boerhaavia diffusa leaves were used to prepare toffee, rasam, chutney powder , thovvaiyal . Boerhaavia diffusa was selected to be the functional ingredient of the nutritious supplement that was developed on account of its high iron content. OBJECTIVE: To develop a product using Boerhaavia diffusa.and to To assess the nutritional content of the product. RESULTS: The Nutritional analysis showed carbohydrate (10.56 mg/gm) and protein (5.76 mg/gm) content of the plant was high, though the quantity of fat (1.61 mg/gm) was in a lower concentration. The major element present in the plant is magnesium (142.9 mg/100 g). CONCLUSION: Boerhaavia diffusa has been used for its anti-diabetic and diuretic properties and also been used for pain relief, anti-inflammation, and treating indigestion. It also has an anti-proliferative effect on some cancer cells, which means it prevents them from spreading. Boerhaavia diffusa also has anti-oxidant,anti-inflammatory and anti-oxidative properties

TPV16/PP/090

ECO PURCHASING – A DISPENSABLE WAY TO GOOD HEALTH

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ABSTRACT

Introduction: Green consumerism creates a balance between the expectations of consumer behaviour and businesses' profit motives - within the orbit of environmental protection. It increasingly calls upon to look at the entire life cycle of a consumer's purchases - because a consumer does not just buys 'a' product, but also everything that went into its production and services that are also environmentally friendly. Methodology: Ten star rated hotels in Pondicherry region was selected and questionnaire containing questions related to eco purchasing was administered to them. Objective: To identify the type of eco purchasing done in the selected hotels. Results: 70 percent of the hotel was buying bio degradable products and 30 percent of the hotels were not buying bio degradable products. 50 percent of hotels were growing the organic plants and using the vegetables and fruits from it and 40 percent of the hotels were not growing the plants but buying the organic vegetables from outside and 10 percent of the hotel was not using the organic vegetables and plants. Cent percent of the hotels checked to observe the ISI marks on the packets while buying .Conclusion: Eco purchasing helps the hotels to stay apart in standards from other hotels. Consumers are alert on their health and prefer to choose food institutions which prefer eco purchasing. The changing trends observed is appreciable.

TPV16/PP/091

ILLICIT PRACTICES AMONG DRUG REPRESENTATIVES

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ABSTRACT

Introduction: Representatives are responsible for selling pharmaceutical products to doctor‘s offices, pharmacies and hospitals. Sales representatives spend most of their working hours on the road enlisting new customers or building relationship with current ones. Methodology: About 11 polyclinics were selected randomly and 113 drug representatives were interviewed and their unhealthy practices were identified. Objective: To analyse the various illicit practices followed by drug representatives for stress relief Results: Majority of 92 percent, 83.2 percent to 63.9 percent did not have the habit of taking tobacco, smoking and alcohol respectively. Among eight percent who have habit of chewing tobacco, 5.3 percent have the practice of consuming twice a day and 0.9 percent had the habit of using gutka whenever felt, and being frequent traveller reported that it was available in many petty shops. Among 36.2 percent of drug representatives had the habit of consuming alcohol. Among 16.8 percent smokers, irrespective of the BMI category 12.2 percent had the habit of smoking cigarette once daily. Conclusion: Three determinants motivation, ability and opportunity when created to drug representatives including attitude, self representation, self efficiency and social influences will intend to protect these young adult population against exposure to foods and eating pattern that contribute to chronic disease risk at early age. Thus this kind of promotion and protection approach will be successful in great achievements in public health.

TPV16/PP/092

HEALTH STATUS OF IT PROFESSIONALS

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ABSTRACT

Introduction: IT professionals are having several occupational risks than the rest of the population because of the specificity of their working conditions. Since the health of IT professionals affects their performances, self-care may examine closely to improve the health care system. Therefore, this study was conducted to state nutritional and health status of IT professionals, performing a survey including dietary intake pattern and health status query.Methodology: About 30 IT professionals were selected randomly and were interviewed .Objective: To analyse the health Status followed by IT professionals. Results: 13% males and 13% females were found to exhibit low blood pressure Majority of the males (n=8) were found within the lower haemoglobin range of below 13.5 mg/dl. 89% of females figured in the lower levels of hemoglobin content of below 12.5mg/dl .A majority of the females (37%) were found to be in the normal random blood glucose range of 70-100mg/dl while twenty three percent of females had high values while 13% of males were found to be within normal range. It is evident from the figure that 30% of females and 20% of males had blood cholesterol levels within 200 mg/dl while 20% of males and 30% of females were found to have higher than normal levels. Conclusion: IT professionals generally had very poor health status.

TPV16/PP/093

A REVIEW ON HYDROGEL NANOPARTICLES

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ABSTRACT

Hydrogel nanoparticles are one of the innovative nanoparticulate drug delivery systems owing to their unique potentials via combining the characteristics of a hydrogel system with a nanoparticles. Several polymeric hydrogel nanoparticles systems have been prepared and characterized in recent years, based on both natural and synthetic polymers. The incorporation of nanostructured fillers into hydrogels has been developed as a popular means for the creation of novel materials with diverse functionality. Hydrogel nanoparticulate materials posses hydrophilicity, flexibility, versatility, high water absorptivity, and biocompatibility of these particles and long life span in circulation and the possibility of being actively orpassively targeted to the desired biophase. Several crosslinking methods have been used in the way to form the hydrogel matix structures. Regardless of the type of polymer used, the release mechanism of the loaded agent from hydrogel nanoparticles is complex, while resulting from three main vectors, i.e., drug diffusion, hydrogel matrix swelling, and chemical reactivity of the drug/ matrix. Thus hydrogel nanoparticles is considered as a most promising and emerging drug delivery system that can play a vital role by addressing the problems associated with old and modern therapeutics.

Keywords: Hydrogel, Nanoparticles, Hydrogel-nanoparticles, Nanogels,

TPV16/PP/094

PROTECTIVE EFFECT OF SPIRULINA ON DOXORUBICIN INDUCED TESTICULAR TOXICITY

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ABSTRACT

Background: Doxorubicin an anthracycline antibiotic, which is used as an antineoplastic drug in the treatment of a wide range of cancers, has been shown to induce reproductive abnormalities in males. Purpose of the study: In the present study, the effect of Spirulina was investigated on Doxorubicin induced testicular toxicity in rats. Objective: To investigate a possible protective role of Spirulina on Doxorubicin induced spermiotoxicity using quantitative, biochemical and histopathological approaches. Method: Adult male albino rats of Wistar strain were administered with Doxorubicin (3 mg/kg body weight, i.p.), once in a week for 35 days and Spirulina (250 mg/kg body weight, oral) daily prior to Doxorubicin administration. Semen quality was evaluated in terms of sperm count and bodyweight. The testicular damage was also assessed by the measurement of marker enzyme levels and histology.Results: Doxorubicin treated rats showed a significant decrease in sperm count and body weight. Doxorubicin treated rats also showed abnormal histological findings and variation in the marker enzyme levels. However, the combined treatment of Spirulina with Doxorubicin restored testicular toxicity to normalcy.Conclusion: This study clearly indicates that Doxorubicin treatment markedly impaired testicular function and the pretreatment with Spirulina might prevent this Doxorubicin induced testicular toxicity.

Key Words: Spirulina, Doxorubicin, Testicular toxicity, Antioxidants

TPV16/PP/095

SYNTHESIS AND EVALUATION OF ANTI-INFLAMMATORY ACTIVITY OF CHALCONE DERVIVATIVES

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ABSTRACT

Chalcones are popular intermediates for synthesizing various heterocyclic compounds. The compounds with the backbone of the chalcones have been reported for various biological activities The presence of a reactive α, β unsaturated keto function in chalcones is found to be responsible for their biological activity. The Claisen Schmidt condensation between acetophenone and benzaldehyde derivatives is an important C-C bond forming reaction, which allows α, β unsaturated ketone such as chalcones to be obtained. The Claisen Schmidt condensation is carried out using aqueous sodium hydroxide or potassium hydroxide or ethanolic sodium hydroxide at 50°C over a period of several hours. The components of the Claisen Schmidt reaction in the current work were substituted by paracetamol and various nitro and hydroxyl aromatic aldehyde, a chalcone component is formed. The component undergoes different reactions with various intermediate compounds like thiourea/ urea, hydroxylamine/ hydrazine, to form thiazine, oxazine, isoxazole, pyrazole derivatives respectively. The synthesized compounds were characterized by physical methods and spectral analysis. The purity of compounds was ascertained by TLC studies. The anti inflammatory activity of synthesized compounds has been evaluated by HRBC membrane stabilization method. Compounds of thiazine and oxazine derivatives of chalcones were found to have maximum activity with reference to the drug diclofenac. This reveals the electronic effect of nitro group on the heterocyclic ring is enhancing the activity.

DESIGN AND INVITRO CHARECTERISATION OF MUCOADHESIVE RAMIPRIL BUCCAL TABLET

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ABSTRACT

In present study the feasibility of preparing mucoadhesive buccal drug delivery system containing Ramipril was developed to improve the bioavailability, avoid first pass metabolism and fast entry into systemic circulation. Buccal tablets of Ramipril were prepared by direct compression method using polymers (such as sodium CMC and HPMC). Seven formulation were developed with varying concentrations of polymers. The designed tablets were evaluated for various physical and biological parameters like drug content uniformity, in-vitro drug release, ex-vivo permeation studies, stability studies, drug-excipients interaction (FTIR). Among seven formulations F7 containing HPMC 40 mg was found to show promising results. Dissolution data revealed that Ramipril in F7 formulation showed 99.2% in 12hrs with mucoadhesion strength of 32.5g . The ex-vivo studies was found to be 95.2% in 12 hrs. Stability studies on the formulation indicated that there is no significant changes in drug content and in vitro dissolution characteristics. FTIR studies showed no evidence on interaction between drug and excipients. The present studies proves that mucoadhessive buccal tablets of Ramipril with sustained drug release properties can be successfully prepared by direct compression method using HPMC and Sodium CMC as mucoadhesive polymers. The prepared Ramipril buccal tablets were able to stay in the buccal cavity for a longer period of time, this shows a potential use of mucoadhesive tablets of Ramipril for treating hypertension.

KEYWORDS: Ramipril Mucoadhesive buccal tablet, Matrix Tablets.

TPV16/PP/097

STROPROTECTIVE AND ANTISECRETORY PROPERTIES OF METHANOLIC EXTRACT OF TRIANTHEMA PORTULACASTRUM.LIN ASPIRIN & PYLORIC LIGATURE INDUCED GASTRIC ULCER IN RATS.

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ABSTRACT

Objective: The present study was carried out to investigate antiulcer activity of methanolic extract of whole plant of Trianthema portulacastrum L. belonging to the family of Aizoaceae in pylorus ligated and aspirin induced gastric ulcer in rats.Methods: Preliminary methanol extract of Trianthema portulacastrum L. (METP) was subjected to the acute oral toxicity study according to the OECD guideline no. 425. Based on which, two dose levels i.e. 250 and 500 mg/kg were selected for the further study. In both models, we assessed ulcer index, gastric juice volume, gastric pH and total acidity. Ranitidine (50 mg/kg) was used as the positive control. Results: In present study, METP showed significantly decrease in ulcer index in both ulcer models in a dose dependent manner. METP showed a dose dependent significant decrease in gastric juice and total acidity in both the models. A dose dependent increase in gastric pH and total adherent gastric mucus was also produced in METP treated groups. Conclusion: The present study suggested that the antiulcer activity of METP on pylorus ligation induced gastric ulcer can due to anti secretory activity. The mechanism of protection against aspirin induced gastric ulcer can be attributed to 5- lipoxygenase pathway.

Key words: Aspirin, Gastric ulcer, Pylorus ligated, Trianthema portulacastrum, Ulcer index.

TPV16/PP/098

EVALUATION OF ANALGESIC ACTIVITY OF Hibiscus Schizopetalus BY CENTRAL AND PERIPHERAL MODELS

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ABSTRACT

Objective: The present study was aimed to evaluate the central and peripheral analgesic activity of ethanolic extracts of Hibiscus schizopetalus (EEHS) (Mast) Hook (Malvaceae) in Wistar rats. Methods: Rats weighing about 180 to 200 g were made into 4 groups of 6 animals each. Aspirin 100mg/kg was used as standard drug. Analgesic activity was evaluated by physical, chemical and thermal methods such as tail clip test, acetic acid induced writhing test and hot plate test at the doses 200 and 400 mg/kg of EEHS respectively. Results: The EEHS was found to be non-toxic up to doses of 2000 mg/kg. The EEHS revealed the presence of flavonoids, alkaloids, terpenes, saponins and glycosides in the phytochemical evaluation. The EEHS treated rats showed significantly increased basal reaction time in hot plate test ($p<0.001$) and in tail clip test ($p<0.01$) respectively, while in acetic acid method significant ($p<0.001$) reduction in a number of writhing was observed. The results were obtained in a dose-dependent manner. Conclusion: Preliminary phytochemical screening of the EEHS which may be responsible for analgesic activities through both by central and peripheral models.

Keywords: Ethanol, Hibiscus schizopetalus, Analgesic activity.

TPV16/PP/099

HEPATOPROTECTIVE AND ANTIOXIDANT PROPERTIES OF JUSTICIA GENDARUSA AGAINST CCL4 INDUCED ACUTE HEPATIC DAMAGE IN RATS.

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ABSTRACT

To evaluate the hepatoprotective effect of To evaluate the effect of hepatoprotective activity of Justicia gendarusa on carbon tetrachloride (CCl4) induced acute liver toxicity in rats, wistar albino rats were divided into 6 group each consisting of 6 animals: Group I served as control rats; Group II included CCl4 treated rats; Group III and IV included rats treated with ethanolic extract (200 and 400 mg/kg respectively) of Justicia gendarusa` (EEJG); Group V included silymarin treated rats. Liver marker enzymes including serum glutamate oxaloacetic transaminase (SGOT), serum glutamic pyruvic transaminase (SGPT), alkaline phosphatase, total protein, bilirubin were evaluated. Antioxidants parameters such as super oxide dismutase (SOD), lipid peroxidation (LPO), catalase (CAT) and reduced glutathione (GSH) were measured and histopathological evaluation of liver tissue was carried out. Our results indicated that treatment with EEJG significantly ($P<0.05$-$P<0.001$) reduced CCl4 induced serum hepatic enzymes levels. Furthermore, EEJG significantly ($P<0.001$) reduced lipid peroxidation in the liver tissues and restored activities of normal levels antioxidant enzymes (GSH, SOD and CAT), which was further confirmed by the histopathological studies. The result of this study strongly indicates that hepatoprotective effect of EEJG is due to antioxidant properties.

Keywords: Hepatoprotective, Justicia gendarusa, Silymarin, Liver, Carbon tetrachloride.

TPV16/PP/100

EVALUATION OF ANTICANCER ACTIVITY OF VARIOUS EXTRACT OF SEEDS OF Amomum subulatum USING CERVICAL CANCER CELL LINES BY INVITRO METHODS.

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ABSTRACT

The aim of the present study is to explore antitumor activity of crude drug extract from Amomum subulatum. Here a different concentration of ethanolic extract of Amomum subulatum was tested for probable antitumor activity on HeLa cell lines. The cells were treated with different concentration of the drug extract and the number of viable cells was determined by tryptan blue. Also, cytotoxicity of the extract was evaluated by MTT (Methyl thiazolyl tetrazolium) assay. The results showed that cell viability of 47.45% was observed in concentration of 125µ/ml which has been taken as 50% inhibition of cells (IC_{50}).Expression of p53 gene and Bcl2 gene were studied under RT PCR. Tumor suppressant gene p53 expression was found to be high in ethanolic extract of plant and low when compared to standard drug. Anti-apoptotic gene bcl2 expression was found to be low in ethanolic extract of plant and low when compared to standard drug. The crude extract of Amomum subulatum has significant antitumor activity and it might be a good candidate for further investigation to develop natural compound as an antitumor agent which can be used for the production of potential anticancer drug and novel pharmaceutical leads.

KEYWORDS: Amomum subulatum, cytotoxicity effect, potential antitumor**.**

CURRENT INDIAN REGULATIONS OF INVESTIGATIONAL OF NEW DRUG APPLICATION

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ABSTRACT

Investigational new drug clinical application in india are regulated by rule by 122DA[4] of the drug and cosmetics act pf 1940 and ensuing drugs and cosmetics rules of 1945 along with amendments issued in the gazette of india by the minister of health time to time.Amdended versions of scheduled Y2005[5]which was first in incorporated in1988 in to the drug and cosmetics act(1945)' defines there requirements and guidelines for investigational new drug applications and its components in india. Effective 15 june 2009,any clinical trial to be conducted in india must be registered with clinical trial registry of india-CTRI[6] before enrollment of first subject in trail. The CTRI has been developed and maintained by ICMRs national institute of medicines statistics with an objective to maintain a register of clinical tail conducted india. The DCG(I) office is primarily responsible for approval of clinical trail with investigational new drug in india.

Key words: Investigational new drug(IND);CTRI;drug and cosmetics act(1945);DCG(I).

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INDIAN REGULATORY FOR NEW DRUG APPLICATION.

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ABSTRACT

Introduction of new drugs is always welcome by the healthcare professionals for use in Indian patients. It is essential at the same time for the medical fraternity to know, understand and comply with the drug regulatory system in India. It includes an overview of the Indian regulations, various regulatory authorities, new drug application, procedures and related data that need to be submitted. Thus a new drug application refers to an application submitted to the regulator to seek permission to import/ manufacture. Overview of Indian regulation involves the India's pharmaceutical policy and drug regulatory governed by the Drugs and Cosmetics Act 1940 and in the drugs and Cosmetics Rules in 1945.the Central Drugs Standard Control Organization (CDSCO) is the regulatory authority involved in the approval of new drugs. The CDSCO functions under the Directorate General of Health Services (DGHS)

Keywords: CDSCO, New Drug Application.

DEVELOPMENT AND EVALUATION OF SELF-ASSEMBLED NANOCERAMIC DRUG CARRIER FOR THE TREATMENT OF DIABETIC FOOT WOUNDS

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ABSTRACT

The main objective of the research was to develop and evaluate self-assembled nanocarrier system loaded with a model drug (cephalosporin antibiotic) for the treatment of diabetic foot wounds. Ceramic nanocarrier was formulated as inorganic cores of calcium phosphate by the precipitation of monobasic sodium phosphate solution and calcium chloride. The inorganic core is freeze dried and mechanically agitated with lactose solution for 9 hrs to induce lactose-coating over the core. The lyophilizised lactose-coated ceramic nanocarriers was loaded with the model drug by adsorption. The lyophilized drug-loaded ceramic nanocarriers were subjected to characterization. FT-IR analysis revealed absorption bands of phosphate, N-H stretch band, β-lactam band, C-H stretch band and presence of broad shallow band due to hydrogen band that confirmed the calcium phosphate core, lactose-coated core and loading of the drug to the coated particles respectively. The sugar coating is confirmed by anthrone test which showed presence of sugar by green color. X-ray diffraction of the coated cores revealed the crystalline peaks which is evident for lactose coating on the core. The drug-loaded ceramic nanocarrier possesses mean particle size of 93.9 nm and zeta potential of -11.3 mv represents a stable formulation. The drug loading efficiency was found to be 82.19% ±1.96%. The in vitro drug release was carried out for a period of 8 hrs which revealed 85% of drug release following zero order kinetics. It was concluded that the formulated self-assembled nanocarrier system loaded with a model antibiotic proved to be ideal in the treatment of the diabetic foot wounds.

TPV16/PP/104

ANALYTICAL METHOD DEVELOPMENT AND VALIDATION OF CLOMIPHENE CITRATE BY HPTLC METHOD IN PHARMACEUTICAL FORMULATION

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ABSTRACT

A new, simple, and rapid high-performance thin-layer chromatographic method was developed and validated for quantitative determination of Clomiphene citrate. Clomiphene citrate was chromatographed on silica gel 60 F254 TLC plate using methanol-ethyl acetate-glacial acetic acid (7:2.5:0.5 v/v/v) as mobile phase. Clomiphene citrate was quantified by densitometric analysis at 245 nm. The method was found to give compact spots for the drug (R_f = 0.75). The linear regression analysis data for the calibration plots showed good linear relationship with r^2 = 0.999 in the concentration range 200–1000 ng/spot. The method was validated for precision, recovery, repeatability as per the ICH guidelines. Statistical analysis of the data showed that the method is precise, accurate, reproducible, and selective for the analysis of Clomiphene citrate. The method was successfully employed for the quantification of Clomiphene citrate in the commercially available preparation.

Key word: Clomiphene citrate, HPTLC, Formulations.

STABILITY INDICATING HPTLC METHOD DEVELOPMENT AND VALIDATION FOR METHOTREXATE API

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ABSTRACT

In this paper we report a validated HPTLC method, which determines stress stability and concentration of Methotrexate in synthetic mixture as per ICH guidelines. Separation was performed using Camag Linomat V semi Automated sample applicator with TLC Scanner III. Stationary Phase consisting of TLC plates (Merck) pre coated with silica gel $60F_{254}$ on Aluminum Sheets was used. Mobile phase comprising of acetone: water (8.5:1.5 v/v) was used. All the system suitability parameter was found within the range. The method was extensively validated for specificity, linearity, accuracy, precision, recovery, limit of quantitation and detection. The methotrexate was found to be highly labile to alkaline and acid hydrolysis compared to oxidation. Densitometric peak purity results indicated the absence of co-eluting peaks with the main peak of methotrexate, which demonstrated the specificity of assay method for estimation of methotrexate in presence of degradation products. The proposed method can be used for routine analysis of methotrexate in quality control laboratories.

Key words: High Performance Thin Layer Chromatography (HPTLC); ICH Guidelines; Methotrexate; Validation; stability studies.

STABILITY INDICATING HPTLC METHOD DEVELOPMENT AND VALIDATION FOR THE DETERMINATION OF NITRENDIPINE IN PURE AND DOSAGE FORM

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ABSTRACT

Objective: A simple, specific, accurate, cost effective and precise and stability indicating HPTLC method was developed and validated for the determination of Nitrendipine in pure and doage form.Methods: Stability test were done through exposure of the analyte solution to Acid, Alkali, Oxidiative, Photo-degradation, Thermal degradation. The chromatographic separation was carried out using Camag Linomat V semi-Automated sample applicator with TLC Scanner III. Stationary Phase consisting of TLC plates (Merck) pre coated with silica gel 60F254 on Aluminum Sheets was used. Mobile phase comprising of Acetonitrile: Ethyl acetate: water (6:3:1 v/v/v).Results: It is highly labile to alkaline and acid hydrolysis compared to oxidation. The correlation coefficient (r^2=0.9986) with slope and Intercept of 2875.3 and 344.43 respectively. The LOD and LOQ were found to be 0.0260 and 0.0788 respectively. The % RSD was found to be 1.510%. The percentage recovery was found to be 100.06%. Densitometric peak purity results indicated the absence of co-eluting peaks with the main peak of Nitrendipine, which demonstrated the specificity of assay method.Conclusion: The proposed HPTLC method was validated and can be applied for the determination of Nitrendipine in pharmaceutical formulations and used in routine laboratories.

Key words: Nitrendipine, HPTLC, ICH Guidelines, stability indicating, method development

TPV16/PP/107

EMULGEL: A RECENT ADVANCE IN TOPICAL DRUG DELIVERY

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ABSTRACT

Dermatological products are diverse in formulation and range in consistency from liquid to powder but the most popular products are semisolid preparation. One among them is the transparent gels which has widely used in both in cosmetics and in pharmaceutical preparations. Gels are created by entrapment of large amounts of aqueous or hydro alcoholic liquid in a network of colloidal solid particles and generally provide faster drug release compared with conventional ointments and creams. A major limitation in the gel is the difficulty in delivery of hydrophobic drugs. So to overcome this limitation, an emulgels are prepared. Emulgel is an emulsion based approach used for delivery of hydrophobic therapeutic moiety and also has the unique properties of gels. When gels and emulsions are used in combined form the dosage form are referred as emulgel. The presence of a gelling agent in water phase converts a classical emulsion into emulgel. Various penetration enhancers can potentiate the effect. The emulgel for dermatological use has several favorable properties such as being thixotropic, greaseless, easily, spreadable, easily removable, emollient, and non-staining, water-soluble, longer shelf life, bio-friendly, transparent and pleasing appearance. These emulgel are having major advantages on novel vesicular systems as well as on conventional systems in various aspects. Thus emulgel can be considered as better topical drug delivery systems for the treatment of dermatological ailments over present conventional systems available in market.

KEYWORDS: Emulgels, Gelling agent, Penetration enhancers, Topical drug delivery.

e-POSTER PRESENTATION

ABSTRACTS

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FORMULATION AND EVALUATION OF HERBAL ANTI-ACNE GEL

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ABSTRACT

Acne is an inflammatory disease of sebaceous follicles of skin. The present study was conducted to formulate and evaluate the topical anti acne formulation. Topical formulations (Gel) have been developed containing hydro-alcoholic extracts of Ocimum basilicum, Acalypha indica, Curcuma longa and Aloe vera concentrate gel powder which have been reported individually for their antimicrobial, anti inflammatory and antioxidant activities. The developed formulation was examined for physical parameters such as colour, consistency, odour, pH, viscosity, spreadability, extrudability and washability.In vitro antibacterial activity was performed for the developed formulations using agar well diffusion method against Propionibacterium acne - a causative organism for acne and which is frequently involved in acne inflammation. The measured zones of inhibitions of the formulations were compared with standard antibiotic (tetracycline), standard marketed topical herbal preparation for acne and active ingredients of the formulations.Results of the investigation showed that formulation 5 has greater antibacterial activity (zones of inhibition >11 mm) than other formulations and which is comparable to that of standard marketed topical herbal preparation (zone of inhibition > 13 mm).

Keywords: Acne, In vitro antibacterial activity, Propionibacterium acne, Zone of inhibition

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STANDARDISATION OF POLYHERBAL FORMULATION – STONIL CAPSULES

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ABSTRACT

Herbal medicines are in great demand in developed and developing countries due to their wide range of biological activities, higher safety margins and cost effectiveness. The quality assessment of herbal formulations is of paramount importance in order to justify their acceptability in modern system of medicine. In the present study, a polyherbal formulation – Stonil capsules recommended for the management of renal stones which consist of leaves of Tribulus terrestris (Zygophyllaceae), leaves and roots of Bergenia ligulata (Saxifragaceae), leaves of Cinnamomoum camphora (Lauraceae) and Shilajit (a mineral drug) was selected and investigated to standardize the polyherbal formulation in accordance to World Health Organization (WHO) norms and standard laboratory procedures. The formulation was evaluated for their organoleptic characters, physico-chemical and phytochemical parameters including spectral analysis and High Performance Thin Layer Chromatography (HPTLC) studies.The selected polyherbal formulation - Stonil capsule complied with the standards recommended by the Indian Pharmacopoeia and WHO standards. The present study is likely to help the Quality Assurance of Polyherbal formulations and in development of standard parameters.

Keywords: Polyherbal formulation, Stonil capsule.

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DESIGN AND EVALUATION OF SUMATRIPTAN SUCCINATE MICROBEADS USING MUCOADHESIVE MATERIAL (Obtained from ZIZYPHUS MAURITIANA)

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ABSTRACT

The objective of this study was to prepare and evaluate mucoadhesive drug delivery of Sumatriptan succinate microbeads. The microbeads were prepared by employing ionic gelation and emulsification ionotropic gelation technique by avoiding the utilization of synthetic polymer in the formulation; instead the natural Mucoadhesive Material (MM) isolated from Ziziphus mauritiana fruit was used along with sodium alginate with different ratio and characterized. The method of preparation is simple, rapid and economical and does not imply the use of toxic organic solvents. From the FT-IR spectra, it was observed that similar characteristics peaks appear with minor differences for the drug and their formulations and concluded that there was no drug – excipients interaction in the formulation. The rheological study of all the formulations showed excellent flow property; suggest that it can be easily handled for good packaging. The SEM studies clearly showed that the obtained microbeads prepared by both the techniques exhibited good spherical, smooth surface and without surface folding. From the results of drug content and microencapsulation efficiency determination, decreased drug content was reported in the formulation prepared by ionic gelation technique. This is due to high solubility of the drug in aqueous. The drug content was increased in emulsification technique may be due to reduce drug leakage to the aqueous medium. The increased percentage of microencapsulation was showed with increase in the concentration of polymer ratio. The encapsulation was found better in emulsification technique.

Key words: Mucoadhesive drug delivery, Microbeads, Sumatriptan succinate, Ziziphus mauritiana

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REGULATION POLICY FOR USE OF FIXED DOSE COMBINATIONS IN INDIA

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ABSTRACT

A combination drug most commonly refers to an FDC (fixed dose combination), which is a formulation including two or more active pharmaceutical ingredients combined in a single dosage form. These are also called as "polypills".The development of FDC is increasing either to improve compliance or to benefit from the added effects of two or more drugs. These are mainly used in the treatment of chronic ailments. In order to tackle the clinical problems of the future, these products are emerging. In India, manufacture of FDC is increasing to boost up the profits, the Indian drug control authority has issued principal notifications prohibiting manufacture, sale and distribution of certain FDCS because they don't have therapeutic justification or cause risk to human beings. Fixed dose combinations are used mainly to treat n-number of symptoms at once in a combination and in India the scenario of fixed dose combination is likely to reduce the doctor's work of advising medicines for each symptom, instead FDC is given. The cons of FDC are increased chances of adverse drug effects, drug interactions when given in combination,dosage alteration of one drug is not possible without altering the other drug and difference in the pharmacokinetics of the formulation. The concept of FDC is well off in India than the western countries because of the legible regulations. There has been increasing concern over the marketing of the large number of drug combinations by the pharmaceutical companies in developing countries which impose financial burden, hospitalization and adverse effects. This review elaborates about the regulations on restricted usage of fixed dose combinations in US but why not in India.

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G-QUADRUPLEX LIGANDS AS STABILIZER TARGETING TELOMERASE ENZYME AS ANTI CANCER AGENTS

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ABSTRACT

The human telomere stabilization with G-Quadruplex DNA tends to induce apoptosis. The molecular target of telomere cascade with a rigid molecular may shows efficacious to treat cancer. The study of intercalation to human telomeric DNA with proposed ligand can be evaluated by the help of biophysical studies and biological studies. G-Quadruplex is one of the key epigenetic episodes of eukaryotes and prokaryotes, generally found in the telomeric end region, immunoglobulin-switch recombination and in the lagging strand of the DNA. Present chemotherapeutic advances are not enough to maintain a life expectancy of cancer affected patients. Number of G-Quadruplex ligands like acridine, perylene, anthraquinones have been synthesized, reported and evaluated them for the inhibitor activity. Therefore, translational research can pave the novel prospect to treat cancer in a fundamental way. In that connection, basic research Showed G-Quadruplex phenomenon of DNA, which is having great impact in current chemotherapy.

Keywords: Perylene Derivatives, G-Quadruplex, Telomerase.