National Conference On Medicinal Screening Techniques

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CAPTOPRIL FLOATING MICROSPHERES: FORMULATION AND EVALUATION

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ABSTRACT:

to create and assess captopril floating microspheres with ethyl cellulose and polymers such as HCMC K100M and HPMC K4M. A controlled release formulation (CRF) for a gastro retentive system may be able to circumvent the short half-life (2 hours) of captopril, which necessitates frequent administration due to its breakdown in the intestinal PH. Captopril floating microspheres were created using the solvent evaporation method. Nine formulations were created in the current investigation utilizing different ratios of ethyl cellulose, HPMC K100M, and HPMC K4M. Micro metrics properties such as FT-IR, SEM particle size and size distribution, percentage yield drug content, entrapment efficiency, drug loading microspheres invitro dissolution studies, and invitro buoyancy release kinetics were then conducted on the prepared Captopril sustained release floating microsphere. There was no interaction between polymers and captopril, according to the FT-IR spectra. SEM verified that the captopril floating microspheres were spherical in shape. The polymer concentration affects the in vitro performance. When compared to alternative formulations, the created sustained released floating microsphere demonstrated better in-vitro drug release of captopril.

PREGNANCY RATES AMONG WOMEN ATTENDING THE ANTENATAL CLINIC AT THE RURAL HEALTH TRAINING CENTRE

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ABSTRACT:

Anemia is a condition that arises from multiple distinct illnesses rather than being a single sickness. It is characterized by a decrease in the amount of hemoglobin in blood compared to normal. Adult anemia is defined by the World Health Organization as hemoglobin levels of less than 13 g/dl for men and less than 12 g/dl for women. Nonetheless, it appears that some normal people have levels lower than this. The blood's ability to carry oxygen is correspondingly reduced by the low hemoglobin content.

Objective: Investigate the frequency of anemia in expectant mothers who visit the prenatal clinic at the Rural Health Training Centre

METHODOLOGY: At the Antenatal Clinic a community-based cross-sectional study was conducted. Our study was approved by the Institutional Ethics Committee [IEC] and conducted over a four-month period, from March 2020to June 2020.

RESULTS: AGE: Of the 269 pregnant women who were enrolled in this study, the majority (22–24 years old) presented.

ANEMICSTATUS: 269 pregnant ladies in total. The majority of the pregnant women in our research had mild anemia.

BMI: The majority of the pregnant women in our study fell within the normal weight range.

EDUCATIONAL STATUS: The majority of pregnant women in our study had only completed secondary school, which is equivalent to part 1c1 trousers education.

OCCUPATION: The majority of pregnant women in our study are homemakers.

GRAVIDA STATUS: The majority of the pregnant women in our study had a gravida status of G2. Type of Family: Of the 25 (464601:) Joint Families in this study, 53.33% were. The majority of the pregnant women in our study were members of mixed families.

FOOD HABIT: Of the participants in our study, 263 (97.760/o) are mixed and 6 (2.23%>) are vegetarians. The majority of the pregnant women in our study were mixed-race.

DURATION OF PREGNANCY: The majority of pregnant women in this study were affiliated with pregnancy lasts for a span of 13–24 weeks.

PERIODS OF BIRTH: The majority of the pregnant women in this study were from birth intervals ranging from one to three years.

EQUALS TO 18 YEARS OLD AT MARRIAGE: According to our research. The majority of the expectant mothers were married and between the ages of 19 and 24.

TAKING IRON SUPPLEMENTS: In this study, the majority of the expectant mothers were supplementing with iron.

Knowledge about iron supplements was possessed by the majority of the pregnant women in our study.

DISCUSSION: According to WHO data, 35–75°/o of expectant mothers in developing nations have anemia, with India having the greatest incidence rate. The current investigation revealed a prevalence rate of 73.3%. Comparably, the prevalence rates of R.G. Vivek (74.1%) and Agarwal (73.7%) were detected; in contrast, Gowthamet.al (96.8%) (137) reported extremely high prevalence, whereas Prasant D et al. reported low prevalence in Nepal (42.5%).

The study's conclusion—that anemia is highly prevalent in pregnant women (73.3%)—makes it abundantly evident that anemia is a serious health issue in rural areas.

THE RETROSPECTIVE COMPARATIVE STUDY EXAMINED THE IMPACT OF METFORMIN ON CULTURE CONVERSION IN PATIENTS WITH TUBERCULOSIS WHO WERE RECEIVING STANDARD ATT AND HAD TYPE 2 DIABETES MELLITUS.

ASSOCIATE PROFESSOR SIKHAKOLLI CHANDRA SHEKHAR OF

MOONRAY INSTITUTE OF PHARMACEUTICAL SCIENCES

ABSTRACT:

Background: Treatment failure is a significant risk factor for patients with diabetes mellitus (DM) and tuberculosis (TB). We have looked at the relationship between metformin and TB treatment, particularly in cases with diabetes.

Goal: To evaluate the effects of metformin conversion in individuals with type 2 diabetes mellitus who have tuberculosis.

Methods: Sputum culture conversion after two months of treatment was the major research endpoint. Patients with culture-positive pulmonary tuberculosis (TB) diagnosed between 2020 were included in this retrospective cohort analysis.

Findings: Of the 870 patients, 586 had pulmonary tuberculosis (TB) with a culture-proven diagnosis. Of them, 196 had diabetes (DM), 110 (56%) of whom received metformin treatment. The baseline characteristics of metformin and non-metformin users differ significantly in statins, with the exception of CKD.

Conclusion: Despite the fact that more metformin users than non-users experienced an unfavorable conversion. We are unable to conclusively state that the conversion is only attributable to metformin use. Additional variables, such as the use of statins and a history of tuberculosis, may also impact the study's findings. Therefore, there is a considerable chance that this trial, an RCT with a greater scientific value, will demonstrate that metformin is an effective antibiotic with anti-TB activity.

EXTENDING THE RISK OF ADRS AMONG GERIATRICS

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ABSTRACT:

Introduction: As a crucial component of assessing ADR reports in early warning systems and for regulatory purposes, we have improved our understanding of the benefit and harm profiles of pharmaceuticals in this effort. The term "taking five or more medications concurrently" is the most widely accepted definition of polyphonic to date, while other definitions have also been used in literature.

The purpose of this study is to identify the adverse drug reactions (ADRs) associated with polypharmacy in older adults. We have discussed the connection between the medication and occurrences, as well as the tracking and evaluation of ADRs in the elderly.

The definition of an adverse drug reaction is defined as "an intervention related to the use of a medicinal product that results in an appreciably harmful or unpleasant reaction and predicts hazard from future administration and warrants prevention, specific treatment, alteration of the dosage regimen, or withdrawal of the product."

While certain adverse drug reactions (ADRs) are unpredictably occurring, like anaphylaxis in a patient following a single, unremarkable exposure to an antibiotic containing penicillin, many can be avoided with sufficient planning and observation. According to epidemiological research, between one-third and one-half of ADRs are (at least possibly) preventable; nonetheless, it is far simpler to identify preventability in retrospect.

Findings: Of the 120 elderly individuals with polypharmacy who were recruited in the study, 70 had 58.33% more than did 50, or 42%. There were more men than women in this study. Ninety-five (75%) of the patients in this study had hypertension, eighty-five (70.83%) had diabetes mellitus, sixty (50%) had chronic kidney disease, and sixty-five (54.16%) had anemia.

VARIOUS RICE PRODUCTS' ANTI-DIABETIC AND ANTI-HYPERLIPEDIMIC ACTIVITIES

RADHIKA PADARTHY, ASSISTANT PROFESSOR

MOONRAY INSTITUTE OF PHARMACEUTICAL SCIENCES

ABSTRACT:

More than half of the world's population depends on Oryza sativa, a staple food that is the second most important cereal crop and a member of the Gramineae and Oryzoides subfamilies. One grain that is a member of the grass family is rice. It is related to other grass plants that yield food grains, or cereals, such wheat, oats, and barley.

By identifying the phytochemical constituents of rice varieties present in rice products and extracting the active constituents of the rice varieties using different solvents like ethanol, methanol, and hexaneal, the present study work seeks to evaluate the pharmacological activities, such as anti-diabetic and anti-hyperlipidemic effects, of the various rice products. This helps to determine the pharmacological activities, i.e., anti-diabetic and anti-hyperlipidemic activities, of various extracts of nee.

We conclude that brown rice, which has a glycemic index of 55 (normal), is highly beneficial due to its high carbohydrate, fiber content, antioxidants, vitamins, and minerals. It also contains flavonoids, which are powerful antioxidants that can help control blood sugar, which can help manage diabetes. Eating these foods is linked to a lower risk of chronic illness, cardiovascular disease, kidney damage, cancer, and Alzheimer's disease. They promote weight loss and fullness as well.

CROTALARIA JUNCEA LEAF OF METHANOLIC AND ETHANOLIC EXTRACTS: ANTIHYPER LIPIDAMIC EFFECTS

REDDIPOGULA KIRAN KUMAR, ASSOCIATE PROFESSOR

MOONRAY INSTITUTE OF PHARMACEUTICAL SCIENCES

ABSTRACT:

The aim of this study is to assess the antihypercholesterolemic effects of an ethanolic extract of the whole plant, Crotalaria juncea Linn, at doses of 50 mg/kg BW and 100 mg/kg BW per day using in vivo experiments.

Methods: In rats fed a high-fat diet, the effects of oral administration of an ethanolic extract of Crotalaria juncea Linn (whole plant) at doses of 50 mg/kg BW and 100 mg/kg BW per day were assessed by measuring parameters such as food consumption, weight gain, faucal fat excretion, serum and liver lipids, biochemical profiles, and histopathological studies. The outcomes were contrasted between animals given a high-fat diet plus atorvastatin (10 mg/kg BW) and those given the usual diet.

Findings: After receiving the ethanolic extract for 35 days, the animal group's levels of TG, TC, LDL, VLDL, HDL+VLDL, VLDL+LDL, LDL/TC, AI, SGOT, SGPT, and

high HDL and HDL/TC values that were considerably ($p<0.01$ & $p<0.05$) dose-dependent. When compared to rats fed a high-fat diet, the liver tissues of the animal groups treated with the herbal extract and standard showed decreased levels of total glucose, HMG-CoA, lipase, amylase, and the percentage of malondialdehyde, but increased levels of SOD, GSH, and catalase. The treated groups' body weight and food consumption were considerably less than those of the model control.

The current investigation's findings demonstrated that an ethanolic extract of Crotalaria juncea L. impacts a number of metabolic and blood lipid parameters in rats, indicating a possible advantage as an antihypercholesterolemic medication.

A STUDY TO INVESTIGATE WRIGHTIA TINCTORIA AEGLE MARMELO'S PHYTOCHEMICAL AND ANTIMICROBIAL ACTIVITY

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ABSTRACT:

Wright iriatinctoria is a woody perennial ornamental plant that is native to India and a member of the Apocynaceae family. It has been reported that this plant's stem bark, leaves, blossoms, and seeds offer therapeutic qualities that include anti-inflammatory, antiviral, antibacterial, wound-healing, anticancer, and anti-ulcer effects. This work aims to offer a comprehensive botanical description, taxonomy, phytochemical analysis, and pharmacological investigation of the plant.

Aeglemarmelos Correa (Rutaceae), popularly referred to as "Bael," has been shown to have therapeutic efficacy and is used in traditional medicine to treat a variety of human diseases. Despite the plant's extensive exploration, there is currently insufficient data to determine which type has the greatest therapeutic potential. The current investigation focuses on the phytochemical screening of 18 different A. meleos varieties and accessions' aqueous and methanolic leaf extracts. Several biologically active phytochemicals were found in the crude extracts of A. meleolos, with the Pant Aparna variety exhibiting the highest concentration of phenols, flavonoids, and alkaloids. The antibacterial efficiency was examined against harmful bacterial strains, and it was discovered that methanolic extract was most effective against S. epidermidis, whereas aqueous extract had the best inhibitory activity against S. aureus at a concentration of 40 mg/mL.

But in aqueous ethanol, E. aerogenes showed the best resistance, followed by K. pneumoniae and S. epidermidis. Aegle marmelos's MIC for both ethanolic and aqueous extracts ranged from 10 mg/mL to 40 mg/mL, while for ethanolic extracts, it was between 40 mg/mL to 160 mg/ml. Numerous bioactive substances, including flavonoids, alcohols, aldehydes, aromatic compounds, methyl esters of fatty acids, terpenoids, phenolics, and steroids, which may have antibacterial action, were found by GC-MS analysis.

ANTI-HYPERTENSIVE DRUGS: UTILISATION AND EVALUATION IN TERTIARY CARE TEACHING HOSPITALS WITH HYPERTENSIVE PATIENTS

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MOONRAY INSTITUTE OF PHARMACEUTICAL SCIENCES.

ABSTRACT:

Goal: The main reason hypertension is considered a serious health issue is because it plays a part in the development and advancement of major cardiovascular illnesses. Early detection and effective management for increased blood pressure can significantly address concerns related to hypertension and its sequelae, thereby reducing the overall burden of disease. The purpose of this cross-sectional observational study is to examine, in light of accepted treatment guidelines, the antihypertensive medication use pattern at a tertiary care hospital. Materials and Procedures: At a tertiary care teaching hospital, prescriptions were checked for antihypertensives at the medicine outpatient department. Following a thorough examination of the patients' medical records, 286 prescriptions for individuals with hypertension were found. Based on comorbidities and demographic traits, the gathered data were classified and examined.

Findings: Of all the antihypertensive medication classes, calcium channel blockers were the most commonly utilized (72.3%). The antihypertensive medication that was prescribed the most commonly was amlodipine (55.6%). Nine percent of thiazide diuretics were used. Sixty-five percent of people followed the National List of Essential Medicines (NLEMs). Compared to monotherapy (48.8%), combination therapy was utilized more frequently (51.5%). In patients with diabetes, 41.4% of patients used angiotensin-converting enzyme inhibitors/angiotensin 2 receptor blockers (ACE-I/ARB).

Conclusions: Generally speaking, the treatment plan followed accepted therapeutic practices. However, a few issues still need to be resolved, such as the underutilization of thiazide diuretics, the increased usage of ACE-I/ARB in diabetic hypertensives, and the increased knowledge of medications from NLEMs.

FICUS DALHOUSIE MIQ: ANALYZATION, PHYTOCHEMICAL SCREENING, AND ANTIBACTERIAL ACTIVITY

SANTOSH CHARY ASSISTANT PROFESSOR OF

MOONRAY INSTITUTE OF PHARMACEUTICAL SCIENCES

ABSTRACT:

The current study's objective was to extract the leaves of Ficus dalhousiae Miq and then assess the extract's antibacterial and antifungal properties. Hexane, chloroform, ethyl acetate, and methanol extracts were the crude plant extracts that were prepared through the use of a soxhlet equipment and a continuous soxhlation procedure. Using the agar diffusion method, the antibacterial activity of the plant extract was tested against three bacterial species: Staphylococcus aureus, Bacillus subtilis, and Escherichia coli, using the cup plate method. These are contrasted with Ciprofloxacin, the common reference medication. This investigation verified that, in comparison to leaf extracts, bark extracts contain more active ingredients. by analyzing Ficus dalhousea Miq's pharmacological properties. Many extracts, the majority of which have some degree of mild antibacterial activity.

EVALUATION OF CHADRAPRABHA VATI'S PHARMACOLOGICAL ACTIVITY ON ALBINO WISTAR STRAIN SERUM RATS,

DONTHULA SATEESH BABU, ASSOCIATE PROFESSOR

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ABSTRACT:

The goal of the current research is to identify the acute and sub-acute toxicity profiles of various Ayurveda Bhasmas and comprehend the adverse consequences brought on by heavy metal exposure. The pills of Chandra Prabhavati were ground into a powder and then floated in water to create a liquid formulation. The rats were divided into groups and given doses of 50 and 500 mg/kg of Chandra prabhavati. The dosage was determined by squaring the human equivalent dosage one and ten times. It was then given orally between the hours of ten and eleven every day for twenty-eight days, with a volume not to exceed one milliliter per 100 grammes of rat weight during the administration of the medication. After seven, fourteen, and twenty-eight days of blood collection, the donors were killed for histopathological analysis.

RUFINAMIDE IN BULK AND PHARMACEUTICAL DOSAGE FORMS: DEVELOPMENT AND VALIDATION OF NEW ANALYTICAL METHODS

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ABSTRACT:

It takes work to develop strategies that will allow us to guarantee the amount of drug substances and drug items. The three approaches' respective strengths complemented one another. As a result, they can be thought of as straightforward, accurate, and sensitive techniques for estimating rufinamide in pharmaceutical and bulk dosage forms. There are only few analytical techniques for determining rufinamide that have been published in the literature. These techniques include LC-MS/MS, UV-Vis Spectrophotometric, and HPLC. Given the aforementioned information, a few straightforward analytical techniques were intended to be developed with economy, sensitivity, accuracy, and precision. Rufinamide's quantitative determination in bulk and pharmaceutical dosage forms was made possible by the development of the current investigation's straightforward, sensitive, exact, and accurate RP-HPLC approach. The outcomes are shown in Table 5.11–5.28. Comparing the RP-HPLC method to the Spectrophotometric methods revealed that it was more sensitive, accurate, and precise. Rufinamide can be routinely determined using this approach in both pharmaceutical dose forms and bulk medication forms.

THE ANTIOXIDATIVE ACTIVITY OF KERATIN IN VITRO (JACQ) COGN,

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AMBICA GUBBA. ASSISTANT PROFESSOR

ABSTRACT:

The goal of this study is to assess Kedrostis foetidissima's systemic record of relative antioxidant activity. The ability of Kedrostis foetidissima's ethanolic extract to scavenge free radicals, hydroxyl radicals, superoxide, and nitric oxide was tested. The total antioxidant activity of the ethanolic extract was evaluated against that of the standard antioxidants, 6-diter-butyl-p-hydroxytoluene (BHT), copper sulphate, and ascorbic acid. The ethanolic extract demonstrated antioxidant potential of in-vitro screening techniques, according to the results. The findings demonstrate that ethanolic extract had a moderate level of action against prescription medications.

RP-HPLC METHODS FOR ARTESUNATE DETERMINATION AND QUALIFICATION

MYADAM NAGARANI. ASSISTANT PROFESSOR OF THE

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ABSTRACT:

For the quantification of artesunate, a reverse phase high-performance liquid chromatography (RP-HPLC) approach that is easy to use, quick, and affordable was developed. As a stationary phase, a C18 Promosil (ODS, 150 × 4.6 mm, 5 µm) column was employed to separate the medication. Ethanol: water (65:35) with a pH of 4.5 was used as the mobile phase. It was operated isocratic ally at a flow rate of 1 mL/min at a temperature of 27°C. The method's linearity, precision, accuracy, robustness, specificity, limit of detection (LOD), and limit of quantification (LOQ) were all validated in accordance with ICH recommendations. The approach yielded an average retention time of 4.509 minutes and a precision, robustness, and accuracy of 0.5357 percent RSD. The concentration range of 2–10 mg/ml showed good linearity, with a slope value of 369,928 and a regression coefficient R2 value of 0.9995. In summary, the devised approach was successfully verified in accordance with ICH criteria and used to the quantification of artesunate in fast dissolving tablets (FDTs).

INVESTIGATIONS ON THE ANTI-DIARRHEAL ACTIVITY OF MALACHRA CAPITTATA (L.) IN EXPERIMENTAL ANIMALS: A PHARMACOLOGICAL APPROACH

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AT MOONRAY INSTITUTE OF PHARMACEUTICAL SCIENCES.

ABSTRACT:

The goal of the current investigation was to objectively assess the anti-diarrheal properties of an aqueous extract of Malachra capitata Linn (AMC) against a rat model of castor oil-induced diarrhoea. This study used enter pooling, small intestinal transit, and castor oil-induced diarrhea in rats to examine the antidiarrheal properties of an aqueous extract of Malachra capitata. Using the enter pooling method, the weight and volume of intestinal content caused by castor oil were investigated. While AMC at dosages of 200 and 400 mg/kg p.o. significantly reduced faecal output, frequency, and consistency of diarrhea and enter pooling, the standard medicine diphenoxylate (5 ml/kg, p.o.) significantly reduced faecal output and frequency of droppings. The longest distance the charcoal travelled divided by the length of the small intestine was used to calculate the gastrointestinal transit rate. The castor oil-induced charcoal meal transit was considerably ($P<0.001$) reduced by AMC at dosages of 200 and 400 mg/kg. In addition to a little decrease in intestinal transit, the AMC revealed a significant decrease in the quantity of diarrheal stools as well as in the weight and volume of the intestinal contents. The outcomes validate the effectiveness and support the traditional belief that it is an anti-diarrheal medication. In order to fully comprehend Malachra capitata's anti-diarrheal activity, more research is required.

UTILISING A SIMULTANEOUS EQUATION METHOD, THE FORMULA FOR A TABLET IS ADJUSTED TO INCLUDE THE VALUES OF AZOTHROMYCIN AND CEFIXIME TRIHYDRATE.

SATTUR SWETHA. ASSISTANT PROFESSOR AT

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ABSTRACT:

UV spectrophotometric method has been developed for the simultaneous determination of azithromycin (AZI) and cefixime trihydrate (CEFI) in tablet formulation that is simple, precise, and accurate. The method relied on employing equations to analyze the two drugs at the same time. Both AZI and CEFI have shown absorbance maxima in methanol at 222 and 289 nm, respectively. With an extraordinarily high correlation value (r2 = 0.999), both medications exhibited linearity in the concentration range of 10–50 g/ml. For AZI and CEFI, the corresponding limits of quantitation were 2.40 and 4.60 g/ml, while the corresponding limits of detection were 0.81 and 1.52 g/ml. Validation proved that the recommended approach is appropriate for quantitative drug determination. The method was effective in analyzing a pill composition.

A REVIEW OF THE USE OF RP-HPLC IN THE DEVELOPMENT OF ANALYTICAL METHOD

OMKAR SWAROOP ASWA. ASSOCIATE PROFESSOR

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ABSTRACT:

Chromatography is largely used in chemical analysis, where it serves as a separation technique. One particularly versatile method is high-performance liquid chromatography (HPLC), which separates analytes by passing them through a column filled with particles that are as small as micrometers. Reversed-phase chromatography is currently the most often utilized HPLC separation method. This can be attributed to the reversed-phase method's ease of use, adaptability, and broad applicability, as it can manage molecules with varying molecular masses and polarities. Applications for reverse phase chromatography include analytical and preparative methods for biological purification and separation. Reversed phase chromatography is a great method for separating molecules with some degree of hydrophobicity, such as proteins, peptides, and nucleic acids, with good recovery and resolution. The significance of RP-HPLC in the development of analytical methods is discussed in this study, along with their approaches and a brief overview of the crucial chromatographic parameters that must be optimized for effective method development.

FOR THE SIMULTANEOUS ESTIMATION OF PARACETAMOL AND FLUPIRTINE MALATE IN PURE AND PHARMACEUTICAL DOSAGE FORM, A NEW, STRAIGHTFORWARD SPECTROPHOTOMETRIC METHOD HAS BEEN DEVELOPED.

JONNALAGADDA SUNITHA. ASSOCIATE PROFESSOR AT

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ABSTRACT:

For the simultaneous estimation of paracetamol and flupirtine maleate in pure and pharmaceutical dosage form, a novel Vierordt's approach, also known as the simultaneous equation method, was developed and validated. It is straightforward, exact, accurate, repeatable, and efficient. The technique relied on measuring the absorbance of paracetamol and flupiritine maleate in 0.1 N HCl at two wavelengths, 245 nm and 344.5 nm, respectively. The concentration ranges of 5–15 µg/mL for paracetamol and 1.53–4.61 µg/mL for flupiritine maleate were found to have linear calibration curves, with correlation coefficient values (R2) of 0.999. For paracetamol, the LOD and LOQ were 185.90 ng/mL and 563.38 ng/mL, and for flupiritine maleate, they were 78.89 ng/mL and 239.06 ng/mL. The percentage RSD value was confirmed to be within limits (%) in the precision study. The estimated method's accuracy was confirmed by the percentage recovery at different concentration levels, which ranged from 99.18 to 100.02% for paracetamol and 98.47 to 100.09% for flupiritine maleate. The findings of this study suggest that a straightforward, precise, accurate, and cost-effective approach can be used to estimate paracetamol and flupirtine maleate simultaneously in pure and tablet dose forms. The simultaneous estimate of paracetamol and flupiritine maleate in pure and pharmaceutical dosage forms can be effectively accomplished with the help of the suggested approach.

ORGANIC EXTRACTS FROM CLEOME SPINOSA JAQC WERE SUBJECTED TO PHYTOCHEMICAL ANALYSIS AND EXAMINED FOR ANTIMICROBIAL ACTIVITY.

BOLGARI KUMARI. ASSISTANT PROFESSOR

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ABSTRACT:

because Cleome spinosa Jacq was used. This study assessed the in vitro antibacterial activity and phytochemical composition of extracts from the roots and leaves of (Cleomaceae), a plant used in traditional medicine to combat inflammatory and infectious processes. from foliage

(L) and C's roots (R). Several extracts from spinosa were obtained (ethyl acetate: EAL and EAR, methanol: ML and MR, cyclohexane: ChL and ChR, chloroform: CL and CR). In order to determine the minimum inhibitory (MIC) and microbicidal (MMC) concentrations against 17 species, including bacteria and yeasts, the antimicrobial activity was assessed using the broth microdilution method. In addition, eight clinical isolates of Staphylococcus aureus were used to evaluate the antibacterial and combinatorial effects of oxacillin. Every C. Because spinosa extracts inhibited every examined bacterium and yeast, they demonstrated a wide range of antibacterial activity. The phytochemicals (flavonoids, terpenoids, and saponins) found in the extracts of C appear to be connected to this activity. spinosa. The most active extracts against S were ChL and CL, with MICs of less than 1 mg/mL. Micrococcus luteus, Bacillus subtilis, and aureus. The fact that these concentrations are substantially lower than their 50% hemolysis concentration (HC50) values should be noted. The average MIC and S were found to be strongly correlated. aureus and their flavonoid ($r = -0.87$) and phenolic ($r = -0.89$) content, supporting the potential impact of these metabolite groups on C's antibacterial action. extracts made from spinosa. To top it off, CL and CR had the strongest inhibitory action against S. clinical isolates of Staphylococcus aureus, they also demonstrated a synergistic effect of oxacillin against each of these bacteria (at least in one combined proportion). These findings support the search for active ingredients that may serve as lead(s) molecules in the creation of novel antibiotics.

RED BLOOD CELL

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ABSTRACT:

During their maturation phase, human red blood cells (RBCs) undergo significant differentiation and lose much of their internal machinery as well as all of their organelles. Red blood cells (RBCs) are essential for almost all basic physiological processes and play a major role in the respiratory system of the body because they carry oxygen to all cells and tissues and release carbon dioxide into the lungs. RBCs can flex to fit through any blood vessel, even the smallest capillaries, thanks to their flexible shape. Human red blood cells travel through the bloodstream and come into contact with a wide variety of various cell types during the course of their 120-day lifespan on average. RBCs can actually connect and communicate with bacteria, macrophages, platelets, and endothelial cells (ECs). They also play a significant part in the immunological response against infections and in the maintenance of thrombosis and hemostasis. We concentrated our attention on RBC membrane components such as ion channels, proteins, and phospholipids in order to clarify the mechanisms of interaction of RBC and these other cells in both health and disease, as well as to highlight the role of important key players. An overview of current knowledge on the interaction of RBC with other cells, ECs, and platelets, in physiological and disease conditions is presented here. It has been stated that there are indirect contacts between these cells as well as direct interactions through receptors on the RBC and other important actors, such as ECs, platelets, WBC, macrophages, and other RBC. Proteins, secreted chemicals or particles from these cells, and plasma ligands can all be the source of indirect contact. The dynamic and rheological distribution of red blood cells in contact with other cells under physiological flow circumstances is the subject of other indirect interactions covered in this review that are mechanical in nature. This highlights the intricacy of the worldwide relationships in which adult RBC participate and, more significantly, it calls attention to the pathological conditions.

WILSON DISEASE

ASSISTANT PROFESSOR SWATHI MOLGARA

AT MOONRAY INSTITUTE OF PHARMACEUTICAL SCIENCES

ABSTRACT:

An autosomal-recessive ailment called Wilson's disease is brought on by a mutation in the ATP7B gene, which impairs the biliary excretion of copper. A variety of clinical symptoms, including as hepatic, neurological, psychiatric, ophthalmological, and other disorders, can result from subsequent copper accumulation, which starts in the liver and eventually spreads to the brain and other organs. Because there are so many known mutations, genetic testing is not practical. Therefore, a battery of laboratory and other diagnostic tests must be used carefully to get an accurate diagnosis. The progressive deterioration and eventual mortality that would otherwise certainly occur can be successfully ameliorated or prevented with lifelong palliative therapy and an increasing stable of drugs, or with liver transplantation if necessary. Wilson's disease (WD) is covered in this article along with its epidemiology, genetics, pathophysiology, clinical features, diagnostic testing, and treatment. The American Association for the Study of Liver Diseases and the European Association for the Study of the Liver have published clinical practice guidelines for WD in 2008 and 2012, respectively. They concentrated on the disease's hepatic components. The European Society of Pediatric Gastroenterology Hepatology and Nutrition recently released a policy paper on pediatric WD. Harmonizing guidelines for the neurological, pediatric, and hepatic aspects of the disease and contextualizing them to the resource-constrained settings was deemed necessary. Thus, in order to develop new guidelines, experts from national societies in India representing three disciplines—neurology (Movement Disorders Society of India), pediatric hepatology (Indian Society of Pediatric Gastroenterology, Hepatology and Nutrition), and hepatology (Indian National Association for Study of the Liver)—came together. Using MEDLINE (PubMed), a literature search was conducted on prospective and retrospective investigations of WD. Members used the nominal voting method to cast their votes on each recommendation. The evidence's quality was assessed using the Grades of Recommendation, Assessment, Development, and Evaluation approach. There were queries about diagnostic tests, the scoring system, and how to change it to make it work in environments with limited resources. Although 24-hour urine copper and ceruloplasmin are still significant, there is little

MEDICAL HERBS USED FOR HYPERTENSION TREATMENT

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MOONRAY INSTITUTE OF PHARMACEUTICAL SCIENCES

ABSTRACT:

Hypertension is a widespread issue that many individuals deal with these days. The number of individuals with hypertension has not decreased despite the fact that billions of dollars are spent annually on the diagnosis and treatment of cardiovascular disease. Alternative medicine provides a viable means of reducing the growing population of hypertensive individuals. Research has shown that a range of complementary therapies, such as diet, exercise, stress management, herbs, and supplements, can effectively lower high blood pressure. An increasing number of studies on herbal treatments for hypertension are being conducted annually. Numerous herbal remedies, including Punarnava, Barberry, Rouwolfia, Garlic, Ginger, Ginseng, and Arjuna, can be used to treat hypertension without risk. The medical word for high blood pressure is hypertension (HTN). In addition to raising the risk of heart disease and stroke, it is harmful because it causes the heart to work too hard and leads to atherosclerosis, or the hardening of the arteries. Congestive heart failure, renal disease, and blindness are among the various diseases that can result from high blood pressure. The majority of conventional antihypertensives have a long list of adverse effects. Due to their superior body acceptance and fewer adverse effects, herbal medications are used for primary healthcare by between 75 and 80 percent of the world's population, primarily in underdeveloped nations. Extensive study has been conducted in the past three decades on native plants that have hypotensive and antihypertensive medicinal properties. Certain medicinal plants have been shown to have hypotensive and antihypertensive effects, whereas others have been shown to have the opposite effect. But in order to fully utilize the antihypertensive potential of such herbal treatments, additional scientific study is needed to clarify the safety profile and confirm their efficiency. Ayurvedic expertise must be combined with modern medicine.

SOLID DISPERSION FORMULATION AND EVALUATION

ASSOCIATE PROFESSOR GEETHAREDDY KONDAMPALLI

MOONRAY INSTITUTE OF PHARMACEUTICAL SCIENCES

ABSTRACT:

Phenylacetoxyacetic acid, or 2-[(2, 6-dichlorophenyl) amine] aceclofenac, is a potent non-steroidal anti-inflammatory medication (NSAID) that is taken orally. It contains phenyl acetic acid group and has exceptional anti-inflammatory, analgesic, and antipyretic characteristics [1], [2]. Among the NSAIDs, aceclofenac seems to be especially well-tolerated, with a lower frequency of gastrointestinal side effects [3]. Regretfully, the low water solubility of aceclofenac (0.058 µg/ml) results in inadequate oral bioavailability and poor dissolution. Based on their solubility and permeability, all therapeutic candidates are categorised into four classes by the biopharmaceutical classification system (BSC) [4]. One example of a BSC class II chemical is aceclofenac, whose oral bioavailability is based on how quickly it dissolves in the gastrointestinal system [5, 6]. For this reason, increasing aceclofenac's solubility is crucial to increasing both its bioavailability and therapeutic effectiveness. Using Avicel 200 and Sylysia 350 as polymers, the current study aimed to increase the rate of dissolution of the poorly water-soluble medication aceclofenac (BCS-class II). Using various ratios of aceclofenac to polymers, a kneading method was used to generate surface solid dispersion (SSD). To assess the impact of polymer on aceclofenac's aqueous solubility, a phase solubility research was carried out. Differential scanning calorimetry (DSC), X-ray diffraction study (XRD), Fourier transformation infrared spectroscopy (FTIR), and scanning electron microscopy (SEM) were used to assess the solid state characteristics. An in vitro dissolution investigation with a pH of 6.8 was conducted in phosphate buffer. Aceclofenac and polymer somewhat interacted, according to a solid-state investigation. When compared to pure aceclofenac, the in vitro dissolution rate of the drug from solid dispersion (SD) was noticeably higher. The type and quantity of polymer utilized had an impact on the medication's rate of dissolution. Aceclofenac/Sylysia 350 solid dispersion (1:3) dissolved at a lower rate than aceclofenac/Avicel 200 solid dispersion (1:5). Therefore, the aceclofenac dissolution profile can be effectively improved by using the solid dispersion technique.

WHO GUIDELINES ON SAFETY MONITORING OF HERBAL MEDICINE IN PHARMACOVIGILANCE SYSTEM

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ABSTRACT

The World Health Organization (WHO) has expressed its gratitude for the active involvement of national pharmacovigilance centers and drug regulatory bodies in the creation of these guidelines. This has given these authorities a helpful place to start when it comes to enhancing communication, which is necessary to guarantee advancement towards their shared objective—the safety of herbal medications. It is advised that herbal medications be covered by the national pharmacovigilance systems that are currently in place or, in the event that such systems have not yet been created, that comprehensive national pharmacovigilance systems be established. As a result, the guidelines highlight the unique difficulties in properly monitoring the safety of herbal medications and offer solutions. The mechanism for reporting adverse reactions to herbal medications and the investigation of the reasons behind the reported adverse reactions receive extra focus. Nowadays, poor product quality or incorrect use account for the majority of reported adverse events associated with the use of herbal products and medicines. like events may have been caused by insufficient regulatory procedures, shoddy quality control systems, and mainly unregulated distribution routes (like mail order and online sales). Events arising from such circumstances will need to be minimized or eliminated in order to increase the body of knowledge regarding actual adverse reactions to herbal medications and to prevent squandering limited resources for finding and analyzing adverse events. Thus, the World Health Organization (WHO) encourages its member states to enhance national herbal medication regulation, registration, quality assurance, and control. Furthermore, the national health authorities ought to focus more on consumer education and skilled practice when dispensing herbal remedies.

DETERMINATION OF CASEIN CONCENTRATION IN DIFFERENT MILK SAMPLES

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ABSTRACT

The family of similar phosphor proteins (αS1, αS2, β, κ) is called casein (from the Latin caseus, "cheese"). These proteins, which include c, are frequently detected in milk from mammals. 20% to 45% of the proteins in human milk and 80% of the proteins in cow's milk. From being a key ingredient in cheese to being used as a food additive, casein has several applications. Sodium caseinate is the most widely used type of casein. Casein provides amino acids, carbohydrates, and two necessary elements, calcium and phosphorus, as a food source. Proline residues are abundant in casein and do not interact. Moreover, disulfide bridges do not exist. It has comparatively little tertiary structure as a result. It is not very soluble in water due to its considerable hydrophobicity. Casein micelles are a suspension of particles found in milk that resemble surfactant-type micelles just somewhat in that they are spherical and have hydrophilic portions that are at the surface. Nonetheless, the core of a casein micelle is extremely hydrated, in stark contrast to surfactant micelles. Hydrophobic interactions and calcium ions hold the caseins in the micelles together. The unique structure of casein within the micelles could be explained by a variety of molecular theories. One theory suggests that the micellar nucleus is made up of many submicelles, with κ-casein microvellosities forming the periphery. According to a different concept, casein-interlinked fibrils create the nucleus. Lastly, for gelling to occur, the most recent model suggests a twofold link between the caseins. Micelles are viewed by all three models as colloidal particles made of soluble κ-casein molecules encased in casein aggregates. Casein has an isoelectric point of 4.6. Casein has a negative charge in milk because the pH of milk is 6.6. The protein that has been refined is not soluble in water. It is also not soluble in neutral salt solutions, but it can be easily dissolved in diluted alkalis and salt solutions like sodium acetate and sodium oxalate in water. A peptone containing phosphate can be hydrolyzed by the enzyme trypsin.

ANALYSIS OF HYPERTENSION

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ABSTRACT:

In order to ascertain whether arterial hypertension is specifically linked to an increased risk of vascular dementia (VaD), a meta-analysis of epidemiological and case control studies was conducted. Longitudinal and cross-sectional prospective studies with a normal control comparison group were systematically reviewed, and operationalized criteria were used to define both hypertension and VaD. The reference lists of included articles and reviews were searched, in addition to the Cochrane Library, Embase, Medline, and PsycInfo data sources. If operationalized criteria for hypertension and VAD were supplied, together with the number of cases with and without hypertension in the VaD and non-demented groups, original prevalence or incidence studies were included. Eleven studies that recruited volunteers or clinical patients, or those were population-based, looked at a total of 768 individuals with VaD and 9857 control cases; intervention studies, post-stroke, and CADASIL studies were omitted. Anxiety disorders, hypertension, and coronary heart disease (CHD) all significantly increase patient morbidity and healthcare system expenditures. For many years, theories and research have suggested links between these illnesses. Specifically, psychosocial stressors linked to anxiety disorders enhance circulating catecholamines and autonomic arousal through the hypothalamic-pituitary axis. This greater level of arousal is linked to a pro-inflammatory state, elevated risk of hypertension, and the eventual development of coronary heart disease. This correlation is valid for a variety of anxiety disorders, including posttraumatic stress disorder and generalised anxiety.

Disorder, obsessive compulsive disorder, and panic disorder) as well as when adjusting for co-occurring illnesses like depression and physical diseases. Numerous cross-sectional research show that anxiety and hypertension are positively correlated. Anxiety and hypertension are correlated in a bidirectional manner, with people who experience anxiety having a higher likelihood of experiencing hypertension. A few investigations, nevertheless, have found no correlation. Longitudinal research indicates that those with anxiety disorders have a higher chance of developing hypertension. More compelling research demonstrates the connections between cardiovascular outcomes and anxiety disorders and symptoms, such as PTSD and panic disorder. It is difficult to draw generalisations from this research, though, because there are many different measures used to assess anxiety disorders. Common illnesses treated in primary care include anxiety, hypertension, and congestive heart failure (CHD). Anxiety may be a significant predictor of future CHD outcomes. Increased awareness of the connections between these illnesses and their potential contributions to the development of one another should make primary care physicians more cautious when it comes to diagnosing and treating anxiety, hypertension, and congestive heart failure.

A SYNOPSIS OF MAN-MADE INTELLIGENCE IN HEALTH CARE

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ABSTRACT:

Artificial intelligence, whether used to find novel links between genetic codes or to control surgery-assisting robots, is revolutionizing and enhancing modern healthcare through systems that can grasp, predict, learn, and act. It is capable of picking up on minute patterns that people would entirely miss. The numerous contemporary uses of AI in the healthcare industry are examined and discussed in this paper. The study focuses in particular on the three newest and most promising areas of AI-powered healthcare: patient care, clinical trials, and AI-led drug development.

The results imply that pharmaceutical companies have profited from artificial intelligence in healthcare by using it to expedite drug research and automate target identification. Time-consuming data monitoring techniques can also be eliminated with the aid of artificial intelligence (AI). The results also show that large amounts of data may be handled and extremely accurate outcomes can be obtained via AI-assisted clinical trials. Health care

AI startups create solutions that support patients in many ways. Clinical intelligence also analyses the medical data of patients, offering them insights to help them live better lives. There is a revolution taking on in the healthcare sector right now. The reasons behind this revolution are rising overall health costs and a dearth of medical specialists. Because of this, the healthcare sector is trying to put new IT-based procedures and solutions into place that can reduce expenses and address these growing issues.

ANALYTICAL DEVELOPMENT AND VALIDATION OF VELPATASVIR

ASSOCIATE PROFESSOR ARIGELA VENKATESH

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ABSTRACT:

The aim of this study is to provide a sensitive, repeatable, inexpensive, exact, and straightforward technique for estimating the velpatasvir drug product using the rp-hplc approach.

Methods: A novel analytical technique utilising liquid chromatography was created to estimate the medicinal product Velpatasvir. At room temperature, the chromatographic separation was accomplished using a C18 column (Luna 18 150*4.6mm3.0um). By using a mobile phase of 0.1% v/v formic acid in water, methanol, and acetonitrile (35:40:25), separation was accomplished. The ultra violet detector was set at 269 nm, and the flow rate was 0.8 ml/minute. Velpatasvir was found to have an average retention duration of 2.62 minutes.

Findings: In accordance with the ICH analytical method validation criteria, the devised method was validated. Every validation parameter fell within the permissible bounds. For Velpatasvir, the test procedures were found to be linear between 20 and 60µg/ml. For velpatasvir, the correlation coefficient was 0.9998. Velpatasvir's mean percentage recovery using the described approach was determined to be between 98.4% and 100.4%. The robustness of the developed approach was also observed.

In conclusion, the approach that was developed proved to be appropriate for the regular quantitative evaluation of Velpatasvir in both pharmaceutical dosage form and bulk. Additionally, it was determined that the devised approach was robust, sensitive, reproducible, linear, accurate, and exact.

ANALYSIS OF SWINE FLU

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ABSTRACT:

Swine flu, often known as hog flu or pig flu, is an infection caused by one of the many strains of the swine influenza virus (SIV). It is a widespread occurrence among pigs globally. Up until now, swine flu was only discovered to infect people who had direct contact with pigs. However, the H1N1 virus is a completely new strain of swine flu that combines the genetic makeup of hen, swine, and human influenza viruses.

Because of the influenza virus, H1N1 influenza, sometimes known as swine flu, is a communicable illness. The H1N1 influenza virus can cause severe sickness and even fatal consequences to one's way of life. The symptoms of the H1N1 virus are comparable to those of the regular flu, and researchers are closely examining the situation to better understand the virus's range of symptoms and mode of transmission. Diagnosing and treating this disease appropriately can help reduce its intensity.

Swine flu often corresponds to the H1N1 influenza strain. However, in addition to H1N2, H3N1, and H3N2, pig flu viruses can occasionally originate from other subtypes. The 2009 swine flu outbreak that killed people switched to the H1N1 strain.

It is important to note that the 2009 pandemic virus was not entirely derived from swine, despite having evolved in pigs. Combinations of pig, bird, and human flu genes are included in the virus.

MECHANOMY OF ANTINEOPLASTIC PHARMACIES

ASSISTANT PROFESSOR GANASALA DEEPIKA OF THE

MOONRAY INSTITUTE OF PHARMACEUTICAL SCIENCES

ABSTRACT:

Chemotherapeutics are substances that are used in medicine to treat or eradicate cancer. These drugs target essential cell division pathways in cancer cells that are proliferating quickly. While some cancer medications come from synthetic or semi-synthetic processes, the majority come from natural sources like bacteria and plants. Cancers can develop in almost every tissue in the body, but how often they occur depends on a person's genetic makeup, food, lifestyle, and exposure to the environment.

Lung, breast, and prostate cancers are the most prevalent types of cancer globally, and thanks to advancements in diagnosis and treatment, their survival rates have climbed. The foundation of cancer treatment has been naturally produced substances, and the search for new anticancer drugs has been fueled by the possibility of finding endemic chemicals that may possess strong anticancer effects.

Several plant extracts or active compounds have been investigated for their potential anti-cancer effects; a few of these will be covered in this article. There are an increasing number of cancer patients worldwide, which leads to an expanding number of distinct chemotherapy treatments being given. Analytical methods are necessary in all pharmaceutical sectors, from drug discovery to drug elimination in wastewater; they include formulation quality control, environment and human exposure, and therapeutic drug monitoring. This is because antineoplastic medicines are highly reactive and hazardous.

GENE THERAPY

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ABSTRACT:

By targeting the underlying causes of illness rather than its symptoms, gene therapy holds the potential to completely transform medicine. As the first ten years of gene therapy draw to a close, this article reviews the strategies used, the outcomes obtained, the lessons discovered, and the significant new discoveries.

Due in significant part to the inadequacy of the gene-transfer vectors that were available, the early results about the clinical efficacy of gene treatments were dismal. However, there has recently been a clear demonstration of the clinical benefit and significant advancements in vector selection and improvement. Gene therapies today has a very good chance of realizing its immense potential in the next ten years.

Clinical trial tactics involving the enhancement of immunotherapeutic and chemotherapeutic approaches are among the gene-based therapeutics for cancer. These tactics include drug sensitization with genes for prodrug delivery, ex vivo and in vivo cytokine gene transfer, and the use of drug-resistance genes to protect bone marrow from high-dose chemotherapy. Targeting the underlying genetic lesions in the cancer cell involves several tactics such as inactivating oncogene expression and replacing tumor suppressor genes with new ones. According to a study of clinical trial data, these medicines can mediate tumor shrinkage with tolerably low toxicity. These trials have mainly involved patients with highly advanced malignancies that are resistant to traditional treatments.

SAPHODE CAMPANULATA: A PHOTOCHEMICAL AND BIOLOGICAL EVALUATION

BOLLU SAI KIRAN ASSISTANT PROFESSOR AT

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ABSTRACT:

Spathodea campanulata is the P. Beauv., a large, upright tree in the Bignoniaceae family, has long been used medicinally in Africa. It is described in the traditional system as a treatment for wounds, skin infections, stomach ulcers, diabetes, and viral disorders. The review's objective is to disseminate the most recent data on the pharmacology, toxicity, phytochemistry, and traditional applications of S. campanulata. Furthermore, emphasis is placed on the plant's potential applications in treating a variety of illnesses and laying the groundwork for future studies. The literature pertaining to the morphology, traditional applications, phytochemistry, pharmacological activities, and toxicological aspects of S. is compiled for the current review, which spans the years 1972 to 2021. campanulata. The books were gathered from different internet search engines, including. SemanticScholar, Core, Science Direct, PubMed, and Google Scholar. This plant has yielded a variety of chemical substances that have been isolated, such as terpenoids, iridoids, steroids, derivatives of cinnamic acid, cerebrosides, flavonoids, and carotenoids. The anticancer, antibacterial, antiviral, insecticidal, larvicidal, and antioxidant potential has been demonstrated in a few in vitro investigations. Preclinical research has shown extraordinary effectiveness, supporting the plant's long-standing traditional use for years as an antimalarial, antibacterial, wound-healing, antidiabetic, and anti-inflammatory drug without side effects. Drawing from the findings of a range of documented in vitro and in vivo potency and toxicity investigations, S. A promising ingredient in the creation of nutraceuticals to treat diabetes and malaria is campanulata. The sole reported clinical trial used crude extract alone to treat malaria. To fully benefit from this widely available medicinal plant, more research on the separated components, clinical trials, and product development are required given its current vast traditional use.

TUBES WITH CARBON NANO

ASSISTANT PROFESSOR A NEERAJA

MOONRAY INSTITUTE OF PHARMACEUTICAL SCIENCES

ABSTRACT:

One of the marvels of contemporary science is the discovery of carbon nanotubes, or CNTs. Because of their distinct atomic structure, size, and alluring qualities, carbon nanotubes (CNTs) have garnered significant interest in research and are thought to be the stiffest and strongest material ever created. Over the last ten years, scientists have made numerous attempts to find uses for carbon nanotubes (CNTs) by taking advantage of their unique features. Products made from carbon nanotubes are becoming more and more commonplace in our lives, and soon they will be indispensable to technological advancements. Utilizing computational models and methods—which arose with the development of computer technology—to try to understand more has been a recent focus of research. An overview of current research findings on carbon nanotubes and their uses in nanomaterials is presented in this publication. There will also be discussion of a number of significant factors that affect the characteristics of carbon nanotubes.

AN ESSENTIAL COMPONENT OF A BALANCED ENVIRONMENT IS THE ECOSYSTEM.

ASSISTANT PROFESSOR SWATHI KAVALI OF

MOONRAY INSTITUTE OF PHARMACEUTICAL SCIENCES

ABSTRACT:

The planet's life-supporting systems have already passed their critical points, as evidenced by science that has arisen in the last few decades. The reason for this is because all of the planet's resources—air, food, water, oceans, energy, rivers, soil, fish, forests, oil, timber, energy, gas, coal, minerals, and everything else—are being used, abused, and polluted by humans in a mindless manner. Nothing has been spared in its seeming never-ending idolatry of greed, reckless amassing of material goods, and pursuit for more comforts, joys, and conveniences. The repercussions of this attack are evident everywhere.

Keyword: Economic dimensions: the requirements for a decent standard of living, productive assets, and systems, as well as the interactions between these and the environment.

Social and cultural components include systems and needs related to health, education, housing, equity, cultural institutions and norms, and environmental relationships. Political aspects: political systems, needs, and their impact on the environment. This includes the capacity to engage in decision-making.

ATORVASTATIN ORAL DISPERSIBLE TABLET FORMULATION AND EVALUATION

ASSISTANT PROFESSOR VADLA MOUNICA

MOONRAY INSTITUTE OF PHARMACEUTICAL SCIENCES

ABSTRACT:

Orodispersible tablets (ODTs), sometimes referred to as fast melts, quick melts, or rapid disintegrating, have the special ability to dissolve in the mouth in a matter of seconds without the need for water or chewing. The primary reason for the limited systemic availability of atorvastatin calcium is its low oral bioavailability, which is just 14% and demonstrates substantial intestinal clearance and first-pass metabolism. In this work, the mucilage of Hibiscus rosa sinesis was used as a natural superdisintegrant to create orodispersible tablets of calcium atorvastatin by direct compression method, which aims to increase patient compliance, avoid hepatic first pass metabolism, and improve bioavailability. The tablet batches that were made underwent assessments for their hardness, friability, homogeneous drug content, wetting time, water-absorption ratio, and in-vitro dispersion time. The promising formulation's short-term stability testing showed no appreciable changes in the amount of medication present or the in vitro dispersion time.

A CROSS-SECTIONAL OBSERVATIONAL STUDY LOOKING AT THE EFFECTS OF SCREEN TIME ON SLEEP DURATION AND QUALITY

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MOONRAY INSTITUTE OF PHARMACEUTICAL SCIENCES

ABSTRACT:

Goal: To evaluate how screen time affects the length of high-quality sleep.

Goals: 1. To evaluate screen time; 2. 3. To evaluate the quality of sleep using the Pittsburgh Sleep Quality Index and to gauge awareness of the negative health impacts of increased screen usage.

Methodology: A cross-sectional study based on prospective observation carried out in a LOCAL urban area. The study sample consisted of mobile users of any age and gender who were willing to participate with informed consent. The study sample consisted of a questionnaire that was created by carefully going over questionnaires from earlier research that assessed mobile usage patterns, understanding of the health effects of EMR, and sleep quality using the Pittsburgh Sleep Quality Index Scale.

Findings: 82.1% of the participants in the survey own smartphones, and they use them for 7.5 hours a day on average. Women spend slightly more time on screens than men do. The two most often utilized applications are communication (28%) and entertainment and media (47.1). 71.5% of the population, or 86.1%, are aware of the health effects of EMR. Women score somewhat higher on the sleep quality measure (4.99) than do men (4.6). A P Value of 0.08 was found in a two-tailed student t-test used to evaluate the effect of screen time on PSQI score.

Conclusion: Despite the study's findings that more screen time will shorten sleep duration and lower its quality, a thorough analysis with more samples is needed to strengthen the findings. Despite the fact that the sample is aware

Regarding the health effects of EMR emissions from mobile phones, the majority of them are unable to control how much time they spend on their phones.

HESPERIDINE DEVELOPMENT AND VALIDATION USING HPLC METHOD ON ORANGE PEEL CITRUS AURANTIUM

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MOONRAY INSTITUTE OF PHARMACEUTICAL SCIENCES

ABSTRACT:

The feed industry acknowledges plant-derived compounds as vital supplements for the welfare and health of livestock. Regarding this, Citrus aurantium L. extract and Origanum vulgare L. essential oil have been proved to have powerful anti-inflammatory and antioxidant properties in animals. Being the composition of plant-derived extracts greatly impacted by the environmental and growing circumstances of the plants, quality control is important in terms of the concentration of the active compounds to insure the reproducibility of natural feed additives. The present work aimed at the validation of the extraction procedure from feed additives of Hesperidin (HES) and Carvacrol (CAR), the main active compounds of Citrus aurantium and Origanum vulgare extracts. Then, the quantification method of both the analytes was developed and validated by reversed high-performance liquid chromatography coupled with a UV detector. The validated method was tested on premixtures and final feed additives supplied by a local feed factory to supervise the production chain. The extraction method with methanol resulted to be efficient and highly reproducible, with recovery higher than 90% for both the analytes. The chromatographic method has been demonstrated to be accurate, precise (relative standard deviation percent lower than 2.06%), and linear in the tested range concentrations, with regression coefficients equal to 0.995 and 0.999 for HES and CAR respectively. The method demonstrated that the feed additives prepared by the factory by diluting the premixtures were less concentrated than what was declared on the label.

SIMULTANEOUS ESTIMATION OF RANITIDINE AND PARACETAMOL BY USING UV SPECTROMETER

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MOONRAY INSTITUTE OF PHARMACEUTICAL SCIENCES

ABSTRACT:

Paracetamol and Metronidazole were commonly prescribed in combination as an anti-inflammatory agent. In Indonesia, a combination of these two drugs was compounded as divided powder dosage form. It was important to ensure the content uniformity of each compound to implement the patient-oriented medication. UV spectrophotometric combined with chemometrics techniques were developed to quantitatively analyze the content of paracetamol and Metronidazole in divided powder dosage form. Two multivariate calibration method namely principal component regression (PCR) and partial least squares (PLS) were applied in this study. After considering several statistical parameters such as coefficient of determination (R2), root mean square error of calibration (RMSEC), root mean square error of cross-validation (RMSECV), and root mean square error of prediction (RMSEP), the PLS model was chosen to be employed for determining the content of paracetamol and Metronidazole. The linear model for determining content of paracetamol and Metronidazole were $y = 0.9877x + 0.4663$ ($R2=0.9959$) and $y = 0.9685x + 0.3401$ ($R2=0.9875$), respectively. The chemometrics model was applied in the content uniformity analysis of divided powder dosage form samples.

FORMULATION AND EVALUATION OF LOMIFLOXACIN HYDROCHLORIDE FLOATING MICROSPHERES

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MOONRAY INSTITUTE OF PHARMACEUTICAL SCIENCES

ABSTRACT:

The tablet was prepared using appropriate procedure n equipment's. and then Post Compression Studies was performed accordingly. The post compression studies included Hardness Thickness, Friability, Weight Variation, Floating Lag Time, Floating Time, and Drug Release. The results of our study clearly indicate that Weight Variation data of the prepared tablets indicated no significant difference in the weight of the individual tablet from the average value. Hardness of the prepared tablets was observed in range of 1.263±0.07 to 1.184±0.05 kg/cm2 . Thickness of all the tablets was found in the range of 4.16±0.1 to 4.26±0.04 mm. Friability was found below 1%. The floating lag time was found to be in range of 15-22 sec. Total Floating Time was found to be in range of 6-7 Hrs. Swelling Index was found to be between 78 to 124%. Drug Release of FT4 was found to be the good i.e. 94.524%. From results it concludes that the floating lag time increased as hardness increased and F4 had better controlled release than the other formulations. So, formulation F4 provides a better option for Controlled release action and improved bioavailability of Lomifloxacin Hydrochloride Hydrochloride. On the basis of present study it was concluded that floating tablets of Lomifloxacin Hydrochloride hydrochloride can increase the gastric residence time as well as bioavailability and thus better patient's compliance can be achieved.

DISPOSAL PRACTICES OF UNUSED AND EXPIRY MEDICATION IN AN URBAN MUNICIPALITY IN SOUTH INDIA A CROSS SECTIONAL OBSERVATIONAL STUDY

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ABSTRACT:

Background: Inappropriate medicine disposal practices may leads to environmental hazards and also affect health of the people.Aim and objective: To assess the disposal practice of unused and expiry medication in an urban region

Methods: This was across sectional study conducted among 700 respondents using a self-prepared and validated questionnaire comprising various components about the awareness practice and attitudes of disposal of unused and expiry medication among the Urban population. Descriptive statistics were calculated using Statistical Package for Social Sciences (SPSS) version23.

Results: Approximately 90% of the responders have unused expiry medication in their homes, with antibiotics and antipyretics were the most common ones. 87% of respondents checked expiry date of the medication before purchasing. Throwing in the dust bin is the most common (63.8%) disposal practice. 36.2% of the respondents never received any information about proper medication disposal. The main reason for unused medication is expiration of the medication (40.2%) and changing too the r treatment (11.1%) In addition 28.1% responders are unaware about the environmental issues and heal the effects related to improper disposal of medication.

Conclusion: Measures should be taken in order to aware the people about the environmental issues and health effects due to improper disposal of unused/expiry medication. Implementing Medicine take back programmed by pharmacies and hospitals and strict legislation related to Over-the-Counter medications will be assuring.

FORMULATION AND EVALUATION OF FAST DISSOLVING TABLETS OF CHLORPROMAZINE HYDROCHLORIDE

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MOONRAY INSTITUTE OF PHARMACEUTICAL SCIENCES

ABSTRACT:

Chlorpromazine HCl is a potent anti-emetic, act by blocking D2 receptors in the Chemoreceptor trigger zone (CTZ), and antagonize apomorphine induced vomiting. In the present study an attempt has been made to prepare fast dissolving tablets of Chlorpromazine HCl in the oral cavity with enhanced dissolution rate. The tablets were prepared with five super disintegrants eg: Sodium starch glycolate, Crospovidone ,Croscarmellose, L-HPC, Pregelatinised starch, The blend was examined for angle of repose, bulk density, tapped density, compressibility index and hausners ratio. The tablets were evaluated for hardness, friability, disintegration time, dissolution rate, drug content, and were found to be within 1 min. It was concluded that the fast-dissolving tablets with proper hardness, rapidly disintegrating with enhanced dissolution can be made using selected super disintegrants.

A CASE CONTROL STUDY ON FACTORS INFLUENCING SUICIDE ATTEMPTS

PROFESSOR DR. VENKANNA BAYYA OF

MOONRAY INSTITUTE OF PHARMACEUTICAL SCIENCES

ABSTRACT:

Aim: We aim to study psychosocial, socio-demographic and personality related factors associated with suicide attempts.

Methods: From 1st September 2018 to 28th February 2019, we conducted a hospital- based case control study in Department of Psychiatry, Government General Hospital, Guntur, India. One hundred forty-five cases and one hundred forty-five age and sex matched controls were selected for study. Eysenck Personality Questionnaire, Modified kuppuswamy scale, Presumptive Stressful Life Event Scale, Suicide Intent Scale were used. Statistical analysis was done using computerized software.

Results: Majority (n=69, 47.58%) of the suicide attempters were between 21-30 years of age. The number of suicide attempters are more in rural areas than in urban areas and it is statistically significant with an Odds Ratio 2.39. The risk of suicide attempts is more in people who are uneducated (OR – 1.51). It was observed that being an alcoholic will increase the risk of suicide attempt (OR1.73). The average of PSLES score of individuals is more in case group (166.8) than control group (111.386). Having a family history of suicide attempts will increase the risk of suicide attempt (OR -2.28).

Conclusion: Residing in rural areas, alcoholism, having no support from family members and having more stress full life events emerged as predominant risk factors for attempting suicide.

SIMULTANEOUS UV SPECTROPHOTOMETRIC METHODS FOR ESTIMATION OF METFORMIN HCL AND GLIMEPIRIDE IN BULK AND TABLET DOSAGE FORM

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MOONRAY INSTITUTE OF PHARMACEUTICAL SCIENCES

ABSTRACT:

Simple, precise, economical, fast and reliable two UV methods have been developed for the simultaneous estimation of Metformin HCl and Glimepiride in bulk and pharmaceutical dosage form. Method A is Absorbance maxima method, which is based on measurement of absorption at maximum wavelength of 236 nm and 228 nm for Metformin HCl and Glimepiride respectively. Method B is area under curve (AUC), in the wavelength range of 217-247 nm for Metformin HCl and 213-239 nm for Glimepiride. Linearity for detector response was observed in the concentration range of 5- 25µg/ml for Metformin HCl and 5-25 µg/ml for Glimepiride. The accuracy of the methods was assessed by recovery studies and was found to be

100.23 % and 99.67 % for Metformin HCl and Glimepiride respectively. The developed method was validated with respect to linearity, accuracy (recovery), precision and specificity. The results were validated statistically as per ICH Q2 R1 guideline and were found to be satisfactory. The proposed methods were successfully applied for the determination of for Metformin HCl and Glimepiride in commercial pharmaceutical dosage form.

SPECTROPHOTOMETRIC METHODS FOR SIMULTANEOUS ESTIMATION OF NIMESULIDE AND DROTAVERINE

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ABSTRACT:

Three simple spectrophotometric methods have been developed for simultaneous estimation of nimesulide and drotaverine from tablet dosage form. Method-I involves, formation of Q-absorbance equation at 349 nm (isoabsorptive point) and

298.5 nm (max of nimesulide); Method-II simultaneous equation method involves the measurement of absorbances at two wavelengths 298.5 nm (max of nimesulide) and 245 nm (max of drotaverine) in ethanol (95%) and Method-III multicomponent mode of analysis involves the measurement of absorbances at two wavelengths

298.5 nm (max of nimesulide) and 362.5 nm (max of drotaverine); The linearity lies between 5-30 g/ml for both nimesulide and drotaverine for all the three methods. The accuracy and precision of the methods were determined and validated stastically. All the methods showed good reproducibility and recovery with % RSD less than 1. All method were found to be rapid, specific, precise and accurate and can be successfully applied for the routine analysis of nimesulide and drotaverine in bulk and combined dosage form. Key Words: Nimesulide, drotaverine, Q- Absorbance ratio method, Multicomponent mode of analysis, Simultaneous equation method.

PRESCRIBING PATTERN IN GERIATRICS WITH CARDIO VASCULAR DISEASES USING BEERS CRITERIA

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ABSTRACT:

Aim: Cardiovascular disease (CVD) is a major health problem throughout the world and a common cause of premature morbidity and mortality. CVD is a general category of diseases that affects the heart and the circulatory system. The main aim of the study is to assess the prescribing pattern in geriatrics with cardiovascular diseases using beers criteria.

Study Design: Prospective observational study.

Results and Discussion: Total 132 patients, 12 dropouts due to lack of information. Out of 120 patients 69 Patients are identified as Male Patients and 51 Patients are Female. In 120 sample size Maximum No of Cases were found with Ischemic Heart disease (30.8%) Followed by myocardial infarction (24%) coronary artery disease (20%) congestive heart failure (13.3%) Unstable Angina (11.6%). In 120 Sample Size, Male Patients are Suffering More with Complications Compared to Female Patients.

Conclusion: In this Study with Assessing the Prescribing Pattern in Geriatrics with Cardio Vascular Diseases It was found that major complications seen in Male and Female Patients are Ischemic heart Disease with Left ventricular dysfunction Myocardial Infarction, Coronary Artery Disease, Angina, Congestive Cardiac Failure.

COVID-19 INFECTION: THE PERSPECTIVES ON AGE-DEPENDENT DIFFERENCE IN IMMUNE RESPONSES AND IMMUNOLOGICAL STRATEGIES TO REDUCE VIRAL BURDEN

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ABSTRACT:

Covid-19 is caused by the novel strain of Corona virus named as SARS-CoV-2 because of its homology with SARS infection and it is first detailed in Wuhan, China in December 2019. From that point forward, it has spread globally, already contaminating a large number of individuals worldwide and has been proclaimed as a pandemic by the WHO (World Health Organization) on March 2020. SARSCoV- 2 causes acute respiratory infection with fluctuating seriousness in various age groups, wherein geriatric patents in general will have serious disease. In children it is moderately spread till-date. A few contrasts in the pathogenesis of Covid-19 among pediatric and geriatric patients have been proposed to clarify these differences. Severe Covid-19 disease is associated with high and persistent viral burdens in the elderly patients. Children have strong innate immune response because of trained immunity (secondary to live-vaccines and frequent viral infections), leading to presumably early control of infection at the site of entry and also the risk factors associated with children were very less as compared to elderly individuals. The expression of primary target receptor for SARS-CoV-2, i.e. angiotensin converting enzyme-2 (ACE-2), decreases with age which has lung defensive effects and the severity of the disease can be explained by the presence of enzyme called Furin. Henceforth, this review will highlight the clinical.

ASSESSMENT OF ADVERSE DRUG REACTIONS AND DRUG-DRUG INTERACTIONS IN POLYPHARMACY AMONG GERIATRICS IN A TERTIARY CARE HOSPITAL

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ABSTRACT:

Abstract: Polypharmacy is defined as the use of multiple medications by a single patient which is commonly observed among geriatric patients. The use of multiple medications has been shown to predispose patients to adverse drug reactions, drug- drug interactions and medication non compliance particularly in geriatric population. It is a Prospective Observational Study was conducted in a Tertiary care Hospital for a period of 6 months. The Patients who meet the inclusion criteria are recruited. The demographic details and baseline characteristics like age, gender, social history, are taken. Data obtained from their case sheets and through direct patient interview. Assessment and evaluation of adverse drug reactions and drug-drug interactions is performed by using WHO causality assessment scale, stockley's drug interactions, Medscape and their frequencies are studied. In Our Study, Out of 287 Patients 72 ADRs and 22 drug interactions were observed. In those mostly Metformin and ceftriaxone causing ADRs in elderly patients. Out of 22 drug interactions the most prescribed Combinations Drugs Glimepiride with Ranitidine, and Furosemide with metformin causes Hypoglycemia. In these Mild Drug interactions where 9 Moderate Drug interactions were 5 and Severe Druginteractions were 7. Increasing age and polypharmacy were identified as the predictors of ADRs and Drug-drug interactions. The clinical pharmacist must remain attention in assessing, monitoring and preventing of Adverse Drug Reactions and Drug-drug interactions and making appropriate dosage or therapy adjustments.

COMPARISON OF METFORMIN AND METFORMIN WITH OTHER ORAL HYPOGLYCEMIC AGENTS' COMBINATION EFFECTS ON WEIGHT IN TYPE-2 DIABETES MELLITUS PATIENTS

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ABSTRACT:

We assessed the efficacy and safety of oral antidiabetic drugs (OADs) as an add-on treatment in patients with type 2 diabetes uncontrolled on metformin. PubMed, the Cochrane Library, and Embase were searched from inception to October 20, 2017. Pairwise and network meta-analyses were conducted using Stata 14.1 software. Odds ratios (ORs) and weighted mean differences (WMDs) were used to evaluate outcomes. Sixty-eight trials including 36,746 patients were analyzed. No significant differences in the risk of major adverse cardiovascular events (MACEs) and all-cause mortality were observed among any class of OADs when combined with metformin. All classes of OADs as add-ons to metformin improved glucose control, while sodium-glucose co-transporter-2 (SGLT-2) inhibitors showed greater fasting plasma glucose (FPG) reductions {WMD, − 1.49 [95% confidence interval (CI) − 1.69 to − 1.28] mmol/l} and 2 h postprandial glucose (2 h PPG) reductions [WMD, − 3.07 (95% CI − 4.12 to − 2.03) mmol/l]. Thiazolidinediones and sulfonylureas were associated with weight gain [WMD, 2.53 (95% CI 1.95–3.10) kg and 2.00 (95% CI 1.63–2.36) kg, respectively] when added to metformin. Sulfonylureas [WMD, 6.52 (95% CI 4.07–10.45)] were associated with the highest ORs of hypoglycemia. Our results suggest that the seven classes of OADs were not associated with any increased risk of MACEs or all-cause mortality when combined with metformin. Most OADs were associated with similarly large reductions in HbA1c levels when added to metformin, while SGLT-2 inhibitors might be the best option for reducing body weight, FPG, and 2-h PPG.

A NOVEL REVIEW ON NATURAL POLYMERS USED IN FAST DISPERSIBLE TABLETS, DISSOLVING FILM & GELS

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ABSTRACT:

Any pharmaceutical formulation contains two ingredients one is the active ingredient and other is an excipients. Excipients help in the manufacturing of dosage form and it also improves physicochemical parameters of the dosage form. Polymers play an important role as excipients in any dosage form. They influence drug release and should be compatible, non- toxic, stable, economic etc. They are broadly classified as natural polymers and synthetic polymers. They have wide range of applications so selection of polymer is the main step in designing any dosage form. Nowadays, due to many problems associated with drug release and side effects manufacturers are inclined towards using natural polymers. Natural polymers are basically polysaccharides so they are biocompatible and without any side effects. This review discusses various natural polymers, their advantages over synthetic polymers and role of natural polymers in designing novel drug delivery systems. Natural polymers have more preponderant effects on fast dissolving tablets than synthetic polymers. Natural polymers are preferred over synthetic polymers as they are non-toxic, facilely available at low cost, utilize in low concentration and are naturally extracted to provide nutritional supplements. The natural super disintegrant exhibit faster drug dissolution and increased bioavailability thereby availing patient compliance. Natural polymers incremented the drug release from the tablet and decremented the dissolving and disintegration time, they are utilizing as binders, super disintegrant and diluents. Gel system has emerged as one of the greatest new drug delivery systems, they assist for the continuous and controlled release of medicine, increase patient compliance and comforts. There is high scope for research work on gel system in order to provide advanced technique in drug delivery system.

PREPARARTION AND EVALUATION OF HERBAL FACEWASH

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ABSTRACT:

It is more acceptable to consider that naturally cures are safer than synthetic subject's due to fewer adverse effects. The global market demands are expanding to the fusion of plants. Current work of herbal facewash is developmental and evaluation of extracts with facial spray contains peel extract of Tulsi (Ocimum sanctum), leaf extract of Aloe vera (aloe barbandensis), leaf extract of Rose (rosa centifolia), powder of reetha (sapindus mucorossi). Although there are some particular local herbal formulae available on the market, we goal to make pure herbal formulations available without utilizing any artificial ingredient. The plants have been described in the literature having microbes, antioxidants, and anti-inflammatory properties. Formulations was developed and assessed for many characteristics like colour, appearance, consistence, washability and pH. It is very good attempt to establish the herbal face wash comprise extract of orange peel, Tulsi, Reetha powder, Aloe vera extract, Rose water, Honey, face wash not only moisturized, they also utilised as a cleaner. Preferably are employed for oily and dry skin physiology. It provides numerous essential nutrients to the required for maintaining the normal skin. From the studies it was concluded that the prepared formulation can be effectively used for facial care. Preparation of extract Leaves of Tulsi and Orange peel were kept in hot air oven for drying purpose at 45°C grinded into small pieces by using grinder. Reetha was crushed to form powder. Desired quantities of herbal medications were weighed and each herb macerated with Rose water in conical flask and then uniform powder granule size obtained by sieving.

ORALLY DISSOLVING STRIPS

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ABSTRACT:

Recently, rapid dissolving films are gaining popularity as an alternative of fast dissolving tablets. The films are designed to dissolve upon contact with a wet surface, such as the tongue, within a few seconds, allowing the user can ingest the product without need for extra liquid. This convenience gives both a commercial advantage and better patient compliance. As the medicine is directly absorbed into systemic circulation, breakdown in gastrointestinal tract and first pass effect can be prevented. These factors make this formulation most popular and acceptable among pediatric and geriatric patients and patients with fear of choking. Over-the-counter films for pain management and motion sickness are commercialized in the US markets. Many firms are leveraging transdermal medication delivery technologies to develop thin film formats. In the present review, recent improvements related rapid dissolving buccal film composition and associated evaluation parameters are presented. Fast dissolving films are the revolutionary method in oral medication delivery systems. It guarantees patient adherence, particularly for individuals in the pediatric and geriatric categories. When haste is necessary, they can also be employed. A fast-dissolving delivery system should have the following qualities: high stability, transportability, ease of handling and administration, no special packaging material or processing requirements, no water necessary for application, and a pleasant taste. They also have many advantages over conventional dosage forms and can be used in cases of dysphagia, Parkinson's disease, mucositis, or vomiting.