



A two-dimensional quantitative structure-activity relationship investigation on 3-thiocyanato-1H-indoles as possible anticancer agents

V.Haribaskar, M.Gobinath , D.Ramesh & A.Ramesh

Abstract

We conducted two-dimensional quantitative structure activity relationship (2D QSAR) research on a new series of 3-thiocyanato-1H-indoles in an effort to identify powerful anti-cancer drugs. variety of 3-thiocyanato-1H-indoles were subjected to 2D-QSAR using Vlife MDS 4.3. The k-nearest neighbors (kNN) approach, used to Vlife molecular design suites (MDS), yielded a statistically verified two-dimensional quantitative structure activity relationship model. Cytotoxicity activity against the HL60 human cancer cell line was associated with Model 3 statistical data ($q^2 = 0.8001$, $\text{pred } r^2 = 0.4082$). The LOO approach was used for validation. Final Thoughts: The model now includes three attributes that positively correlate with the cytotoxicity activity. There is hope that novel, more effective anticancer drugs could be developed using this 2D QSAR model.



XDR Monitoring at a University Medical Center: An Intermittent Observational Study

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ABSTRACT

Background: In order to analyze the rising trend of XDR colonized/infected individuals from both the community and hospital settings, the research zeroed in on patients with XDR organisms and risk factors. The research used a tertiary care hospital's periodic observational study as its methodology. Previous hospital-identified changes in antibiotic resistance patterns informed the periodic duration selection. December 2018–January 2019 and May 2019–June 2019 and November 2019–December 2020 were the selected time periods. Even though it was a prospective research, in order to get the data, there was no sampling or experimentation. The patient's medical record and the microbiology lab provided all the necessary facts. The results show that, out of the entire culture material, 5-6% were XDR isolates. Among the organisms we examined, Klebsiella accounted for 70%. As time went on, the number of infected patients increased, although colonization was initially greatest. Prolonged exposure to antibiotics (>50%), prior hospitalization (>40%), catheter (70%), and advanced age (mean age-



Highly Accurate and Reliable RP-HPLC Approach for the Measurement of Valethamate Bromide in Pharmaceutical Compounds

V.Haribaskar, M.Gobinath, B.Prathap & D.Ramesh

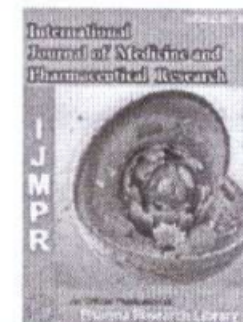
ABSTRACT

The developed and confirmed RP-HPLC technique for the measurement of Valethamate bromide in pharmaceutical formulation is presented in this paper. The method is simple, reliable, sensitive, and robust. The mobile phase was composed of acetonitrile and water in a ratio of 20:80 % v/v. The chromatographic system included LC 2010cHT, Luna HPLC analytical C18 100 A°, 250 X 4.6 mm, 5 µm columns. At 200 nm, a PDA detector was used for detection. The half-life of valethamate bromide was 4.62 minutes. In the 5-30 µg/ml range, the method demonstrates a linear response ($r^2=0.9975$). LOQ was 0.68 µg/ml and LOD was 0.22 µg/ml. Following the requirements laid forth by ICH Q2 (R1), the method was verified. Linearity, precision, specificity, accuracy, and robustness were the parameters that were validated. There was less than a 2% RSD for all of the metrics. The method's accuracy ranged from 99.67 to 100.66% after the typical addition of the medication. A research was conducted to assess robustness using a 23-1 factorial design. The described approach may be used to determine the concentration of Valethamate bromide in pharmaceutical formulations.



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RESEARCH ARTICLE

Evaluation of Phytochemical screening and in vitro Anti-inflammatory activity of Ethanolic extract of *Jatropha gossypifolia* Linn.

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ABSTRACT

The present study was aimed to evaluate the phytochemical screening and in-vitro anti-inflammatory activity of ethanolic extract of *Jatropha gossypifolia* Linn. It reveals the presence of considerable amount of alkaloid, steroid, phenolic substances and vitamin C (Ascorbic acid), moderately saponins and carbohydrates, trace amount of glycoside and resins were explored from the phytochemical screening. The investigation is based on the need for newer anti-inflammatory agents from natural source with potent activity and lesser side effects as substitutes for chemical therapeutics. Realizing the fact this study was carried out to evaluate the in vitro anti-inflammatory activity of ethanolic extract of *J. gossypifolia*. Results of the study is obtained that the ethanolic extract of *J. gossypifolia* was exhibited membrane stabilization effect by inhibiting hypotonicity induced lysis of erythrocyte membrane in concentration dependent manner. It is due to the presence of active principles such as flavonoids and triterpenoids may be responsible for this activity. Hence, *J. gossypifolia* can be used as a potent anti-inflammatory agent.



DESIGN & DEVELOPMENT OF FAST DISSOLVING ORAL FILMS OF KETOPROFEN

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Department of

ABSTRACT

Fast dissolving oral films can be defined as a dosage form, which when placed in the oral cavity it will rapidly disintegrate and dissolves to release the medication for oral mucosal absorption. Ketoprofen is Non-steroidal Anti-inflammatory agent and Analgesic properties and can be used in low dose as analgesic and anti-inflammatory agent in Rheumatoid Arthritis. This study aims to formulate Ketoprofen as oral dissolving film to improve the effective relief of pain with severe

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Research Article

Formulation and evaluation of oxymetazoline hydrochloride nasal gels

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ABSTRACT

The main intend of the implement sniff out formulate and evaluate oxymetazoline nasal gels. To achieve more persistent blood levels with decrease dosage of medicine by extended drug evidence and by passing hepatic initially cross metabolism and body including inferable disgrace. The FTIR & DSC spectra there is not any discrepancein the seam clean medicine, polymers & lipids. The Carbopol consisting of reinforce preail eventual scintillating moreover transparent Poloxamer, Hydroxy Propyl Methyl cellulose gels crop up prospective lucent as a consequence frosted slimy. The pH value of all developed formulations of gels (ONGF1-ONGF8) was in the range of 6.2 to 6.9. Spreadability of gels was in the range 19.51 - 33.91 g.cm/sec, The Viscosity of various formulated gels was found in range of 8628 to 9622 centipoises. The percentage drug content of all prepared gel formulations were found to be in the range of 78.53 to 98.56 %. The gel strength of all prepared formulations of gels was found to be in the range of 69 to 96 %. In-vitro diffusion drug release of Oxymetazoline Hydrochloride of nasal gels ONGF1 shows the 95% drug release. The release order kinetics shows all the formulations ONGF1 to ONGF8 formulations were followed Korsmeyer-Peppas with correlation coefficient $R^2=0.8969$ & 0.2692 respectively. ONGF1 formulation follows both Zero order and Korsmeyer-Peppas models, it indicates diffusion release mechanism followed by non-fickian transport.

Keywords: Nasal, Gels, Oxymetazoline, *In-vitro* diffusion, Carbopol.

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Drug interactions of meglitinide antidiabetics involving CYP enzymes and OATP1B1 transporter

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Abstract: Meglitinides such as repaglinide and nateglinide are useful to treat type 2 diabetes patients who follow a flexible lifestyle. They are short-acting insulin secretagogues and are associated with less risk of hypoglycemia, weight gain and chronic hyperinsulinemia compared with sulfonylureas. Meglitinides are the substrates of cytochrome P450 (CYP) enzymes and organic anion transporting polypeptide 1B1 (OATP1B1 transporter) and the coadministration of the drugs affecting them will result in pharmacokinetic drug interactions. This article focuses on the drug interactions of meglitinides involving CYP enzymes and OATP1B1 transporter. To prevent the risk of hypoglycemic episodes, prescribers and pharmacists must be aware of the adverse drug interactions of meglitinides.

Keywords: drug interactions, CYP2C8, CYP2C9, CYP3A4, nateglinide, OATP1B1 transporter, repaglinide

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Potential action of *Rumex vesicarius* (L.) against potassium dichromate and gentamicin induced nephrotoxicity in experimental rats

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Abstract: To determine the ameliorative potential of the active fraction from different extracts of *Rumex vesicarius* against potassium dichromate and gentamicin induced nephrotoxicity in experimental rats and its possible mechanism of action. Both sex wistar rats were divided into 6 groups (n=6/group) were fed with a control, potassium dichromate and gentamicin supplemented with different extracts at the doses of 200 and 400mg/kg respectively. Oral administration of EERV offered a significant (p<0.01 and p<0.001) dose dependent protection against PD and GN induced nephrotoxicity. Potassium dichromate and gentamicin nephrotoxicity assessed in terms of body weight, kidney weight, creatinine, urea, uric acid, BUN, albumin and total protein. Thus the present study revealed that EERV phytochemical constituents play an important role in protection against kidney damage.

Keywords: *Rumex vesicarius*, potassium dichromate, gentamicin, serum markers, nephrotoxicity, kidney protection.

INTRODUCTION

Kidney is a major target indispensable excretory organ for exogenous toxicants (Sun and Aree, 2012; Li and Douglas, 2013; Margaret and Stephen, 2012), foreign chemicals, detoxification (Swaran and Vidhu, 2010; Margaret, 2013) and elimination of endogenous waste metabolites. Like liver, the renal system also faces high risk of toxicity (Natasha and Kymberly, 2010; Bruna *et al.*, 2012). Disclosure to drugs and chemical reagents like ethylene glycol (Tarek *et al.*, 2013), carbon tetra chloride (Lamiaa, 2014), potassium dichromate (Mahmoud, 2013; José *et al.*, 2013), sodium oxalate (Robert *et al.*, 2014) and heavy metals such as cadmium, mercury, lead and arsenic also persuades nephrotoxicity leads to acute

of toxicants (Dean *et al.*, 2010). The toxicant cause oxidative stress in both lipid per oxidation and protein oxidation has been shown to contribute to cell injury (Kanti and Syed, 2010). Predisposing factors such as age, pharmacokinetics, underlying disease, dose of the toxic substance, concomitant medication determine and influence the severity of nephrotoxic insult (David *et al.*, 2012).

Rumex vesicarius (L.) is a valuable potent medicinal herb, which belongs to family Polygonaceae, commonly known as "Bladder dock or Chukkakura or Khatta palak". Leaves are rich in ascorbic acid, tartaric acids and citric acid (Ashok *et al.*, 2013). The aerial parts of this plant and other species of rumex also contain anthraquinone

Stability Indicating Reversed-phase High-Performance Liquid Chromatography Method Development and Validation for Simultaneous Estimation of Bismuth Subcitrate, Tetracycline, and Metronidazole in Bulk and Capsule Dosage Form

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Abstract

Aim: The aim of the study was to develop a new, simple, sensitive, precise, accurate, and stability indicating reversed-phase high-performance liquid chromatography (RP-HPLC) method for the simultaneous estimation of bismuth subcitrate, tetracycline, and metronidazole in the combined capsule dosage form. **Materials and Methods:** The analysis with Inertsil C₁₈ (250 × 4.6 mm, 5 μ) column under ambient temperature and using mobile phase phosphate buffer pH = 3.5 and methanol in the ratio of 40:60 v/v. **Results and Discussion:** The retention time of metronidazole, tetracycline, and bismuth subcitrate was found to be 2.599 min, 3.805 min, and 4.661 min, respectively. The proposed method was validated according to the ICH guidelines. The linearity study of metronidazole, tetracycline, and bismuth subcitrate was found to be 125–625 μg/ml, 125–625 μg/ml, and 140–700 μg/ml and correlation coefficient (r²) was found to be 0.9994, 0.9993, and 0.9993, respectively. The percentage recovery was obtained as 99.95%, 99.86%, and 100.27% metronidazole, tetracycline, and bismuth subcitrate, respectively. The studies were carried out by conducting deliberate degradation of the sample with exposure to stress conditions such as acidic, alkaline, thermal, oxidizing agent, and light. **Conclusion:** This method was validated and meets the regulatory requirements for specificity, linearity, limit of detection, limit of quantification, precision, accuracy and stability for the determination of metronidazole, tetracycline, and bismuth subcitrate in bulk and capsule dosage form by RP-HPLC.

The Sensitive Method of Subvisible Particle Counting for the Detection and Quantification of Monoclonal Antibody Aggregation Caused by Freeze-Thawing: New Understanding of Particle Function in the Protein Aggregation Process

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Abstract

The purpose of this research was to measure the amount of subvisible particles formed

protocols were addressed. The purpose of the freeze thaw process in phosphate

How the Effectiveness of Aluminum Salt Adjuvants in a Model Lysozyme Vaccine Is Affected by Particle Size and Antigen Binding

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Abstract

The immunogenicity of vaccines made using aluminum salt adjuvants may be diminished if these particles aggregate during the freezing and drying processes, according to certain claims. We used lysozyme as a model antigen and evaluated this notion by looking at the immune response in a mouse model to several vaccine formulations—liquid, freeze-thawed, and lyophilized. Particle size distributions (PSDs) and degrees of antigen-adjuvant binding were shown to vary greatly due to the different

available for purchase are aluminum hydroxide, aluminum phosphate, and aluminum salt adjuvants. In contrast to aluminum phosphate, which has a plate-like molecular structure, aluminum hydroxide, also known as boehmite (AlOOH),³ is composed of needle-like particles with sizes of 2 nm. main particles in the 50 nm range and their phology.⁵ When combined in a solution, the two adjuvants produce stable porous aggregates with a diameter of 1–10 mm.^{4,5} Several factors are likely responsible for the incompletely known mechanisms of action of aluminum salt



Yerikala Ramesh *et. al*/ International Journal of Pharmaceutical Sciences Letters

What Limits the Adsorption of Cyclic Prodrugs of Opioid Peptides into Intestinal Cells (DADLE): Part I. The Function of Efflux Transporters in the Mucosa of the Intestine

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Abstract

In this work, we aimed to understand how P-glycoprotein (P-gp) limits the intestinal mucosal permeability of the opioid peptide DADLE (H-Tyr-D-Ala-Gly- Phe-D-Leu-OH) and its cyclic prodrugs (AOA-DADLE, CA-DADLE, and OMCA-DADLE). By incorporating GF-12098, cyclosporine (CyA), or PSC-833, which are recognized P-gp inhibitors, into the incubation media of AOA-DADLE, CA-DADLE, and OMCA-DADLE (71-117) in the Caco-2 cell model, the high Papp, BL-to-AP/Papp, AP-to-BL ratios were considerably reduced. This indicates that P-gp is limiting the AP-to-BL flow of these cyclic prodrugs. It was shown that AOA-DADLE, CA-DADLE, and OMCA-DADLE had very low mesenteric blood permeation ($PR \frac{1}{4} 0.40 \ 0.56$



An Evaluation of the ADR Monitoring Center's Impact on Pharmacovigilance: A Cross-Sectional Study of Outpatients at a Multi-Super Specialty Hospital in Nellore

B.Naveena, K.Arunchand Roby,
PRAPURNACHANDRA YADALA & S.Naga Bharathi

ABSTRACT

Objectives: The purpose of this study is to assess the level of staff and patient understanding of adverse drug reaction (ADR) and pharmacovigilance systems at a super specialty hospital. In addition, we want to raise patients' awareness of the ADR reporting system. **Research Tools and Procedures:** At a hospital with several different specialties, researchers performed a cross-sectional study. A random sample of outpatients seeking medical attention at KIMS multi-specialty hospital were surveyed, and their demographic information was recorded. **Created for the study:** a questionnaire to gauge level of understanding and sentiment about ADR. Both Telugu and English versions of the demographic data form and questionnaire are provided. The people who took part in the research were given patient information booklets. We educated patients on how to use the ADR PvPI app to report adverse drug reactions yourself. **Descriptive analysis** was used to examine the data. The results show that the patients who visited the tertiary care hospital had a better understanding of ADR than the individuals who did not. There were fifty patients included in the trial. There was a significant lack of knowledge of pharmacovigilance among the participants (56%). The internet and social media had a significant role in raising awareness about this topic. Fifteen people (or 30% of the total) have reported adverse drug reactions (ADRs) after taking medicine, although only ten of those people really told their doctors about it. To a large extent, they do not see ADR reporting as critical. Additional factors contributing to underreporting of adverse drug reactions were transportation challenges and hospital rush. The pharmacovigilance center was unknown to all of the participants. They would rather inform their doctor about adverse drug reactions (ADRs). It is estimated that almost all patients (96%) were unaware of the ADR PvPI app. **Results:** Everyone who took part in the study learned how to use the ADR PvPI app to record their own adverse drug reactions. All participants were given a patient education booklet that



Loop Diuretic Use in Patients with Acute Diagnosis of Heart Failure or Left Ventricular Heart Failure: A Retrospective Analysis of Adverse Events and Complications

Yadala Prapurna Chandra, Sk.Meharunnisa ,B.Naveena & K.Sravanthi

ABSTRACT

This research was deemed noteworthy since the occurrence of adverse events linked to the use of loop diuretics is on the rise per individual. The purpose of this research was to examine the potential side effects of loop diuretics used to treat patients with acute heart failure or left ventricular failure (ADHF/LVF), including arrhythmia, hyponatremia, and renal impairment. The research was planned at the tertiary care hospital's cardiology and nephrology departments and is a single-center retrospective observational study. We gathered information from the patients' medical records. After that, the findings were obtained and adjusted using statistical analysis and detailed analysis. The most significant side effects were low potassium and sodium levels, as well as renal failure and cardiac dysregulation. There were 97 cases of arrhythmia (38.04% of the total), 115 cases of hyponatremia (45.10%), and 43 cases of acute kidney injury (16.86%) related to the adverse event. To name a few examples of diuretic-related adverse medication reactions: allergic rashes, stomach pain, swelling, nausea, vomiting, diarrhea, constipation, muscular spasms, and restlessness. After stomach pain (five cases, or 12.20%), allergic rashes (24 cases, or 58.54% of the total) were the most prevalent side effect. The research found that patients with heart failure who used non-potassium sparing diuretics were more likely to die from adverse events, whereas those who took potassium supplements had better results.

Keywords: Side effects, Problems, Diabetes mellitus type 2, heart failure patients, low potassium levels, loop diuretics.



In-Silico Molecular Dynamics and Docking Research on DNA Minor Groove Connectors

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ABSTRACT

The mechanism of molecular recognition in tiny molecules is the basis of the key challenges in drug development. Investigating hydrogen bonding and polar interactions is the primary method for determining the binding specificity of tiny molecules to DNA. We know very little about the molecular mechanisms of action of the majority of the minor groove binders. A thorough understanding of the molecular mechanisms by which these tiny molecules interact with DNA is necessary because they have the potential to be powerful therapeutic agents against a wide range of disorders. In this work, we used molecular modeling tools to evaluate the complexes' binding mechanism and stability. Researchers used molecular docking to look for specific binding spots and affinities inside the DNA minor groove. Using the AMBER and GROMACS programs, a molecular dynamics (MD) simulation of the DNA minor groove binders was conducted for 5 nanoseconds. We also examined the root-mean-square deviation (RMSD) over time to learn about the systematic deviation of docked complexes in MD simulations, and we discovered that the RMSD variations from AMBER and GROMACS MD simulations are almost identical. Molecular mechanics/generalized Born surface area (MM-GBSA) and Molecular Mechanics/Poisson–Boltzmann Surface Area (MM-PBSA) techniques were used to compute and decompose the binding free energies between the DNA and minor groove binders. Both the selection of MD techniques and the development of novel, highly effective DNA inhibitors may benefit from the study's comparative and systematic examination.

Keywords: *Methods for molecular docking and molecular dynamics (MD), minor groove binders, and MM-GBSA and MM-PBSA.*

INTRODUCTION

The genetic information passed down from

Conversely, groove binding is comparable to the conventional lock-and-key theories of ligand-

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IN-VITRO CHARACTERIZATION AND AEROSOL DISPERSION PERFORMANCE OF TERBUTALINE SULPHATE AND ITRACONAZOLE NANOPARTICLES AS DRY POWDER INSUFFLATION FOR THE TREATMENT OF ASTHMA PREPARED BY PHYSICAL MIXING AND SPRAY DRYING

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ABSTRACT

The objective of the present work was to check an Aerosol Dispersion Performance of Terbutaline Sulphate and Itraconazole Nanoparticles as Dry Powder Insufflation for the treatment of Asthma. Dry powder nanoparticles of Terbutaline Sulphate and Itraconazole were aimed to develop using lactose and trehalose as carriers by physical mixing and spray drying. In this work spray dried nanoparticles containing Terbutaline Sulphate, Itraconazole and combination of both was rationally designed via organic solution advanced spray drying (no water) in closed mode from dilute feed concentration. It was observed that Scanning electron microscopy showed smooth and nearly spherical particles for spray dried formulations whereas formulations prepared through milling were found to have rough and irregular in shape. The Mean Median Aerodynamic Diameter (MMAD) values for milled systems decreased when compared to unmilled systems. For all physically mixed systems, the MMAD values ranges from 3.19 μm to 4.78

A Study on the Characterization and Stability Implications of Investigating Local Mobility in Amorphous Pharmaceuticals

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ABSTRACT:Recent years have seen a flurry of activity in the quest to determine whether or not amorphous drug physical and chemical stability are correlated with molecular mobility. The focus of these studies has been on molecular motions associated with glass transition or global mobility. However, there were a few of instances when the volatility defied explanation by global migration. It is becoming more accepted that local mobility (b-relaxations), which are much below the glass transition temperature, could be influencing stability. The mobility of an amorphous pharmaceutical below the glass transition temperature (g) is often determined by extrapolating data gathered above T_g . This kind of study isn't ideal for determining



Tolerance symptoms of ketamine-A Review

Yadala Prapurna Chandra, P.Nageswari , P.Sailaja , P.Punitha

As a pharmacological phenomenon, drug tolerance occurs when the body's reaction to a medicine decreases with repeated administration, necessitating bigger dosages to have the same therapeutic effect (Editor). There are primarily two causes for tolerance to develop:

1. Pharmacokinetic: This leads to a decrease in the drug's efficacy due to its rapid metabolism.
2. Adaptive changes, including a rise or reduction in the number of receptors, as seen with morphine, occur in pharmacodynamic terms.

Ketamine is a drug that's gained popularity in recent memory as a means of managing pain, depression, and other conditions that affect individuals. The drug became known for its use in the nightclub and the rave scene, which warranted significant concern because of its intense effects. In the hands of medical professionals, ketamine treatment is a safe and effective means of managing these conditions. However, when abused, ketamine tolerance and dependence can occur, which can lead to ketamine addiction. In this blog, we'll discuss how ketamine use has become a widespread problem and how to manage ketamine tolerance. In tachyphylaxis, the drug's effect



Spectrophotometric Method Development and Validation of Levosulpiride in Bulk and Pharmaceutical Formulations.

V.HariBhaskar, Sk.Salma, G.BuelaPriyanka & A.Ramesh

Abstract

A validated UV-Visible spectrophotometer technique was used to assess the levosulpiride concentration in both bulk and pharmaceutical formulation. In 0.1 N HCl, the maximum wavelength (λ_{max}) measured for levosulpiride was 288.1 nm. Between 6 and 36 $\mu\text{g/ml}$, the medication demonstrates linearity. The standard graph showed a correlation value of 0.999. The suggested procedure produced test percentages of commercial formulations that were consistent with the claims made on the label. A recovery experiment was conducted at three distinct levels (80%, 100%, and 120% recovery) to verify the method's accuracy. The percentage recovery ranged from 98.00% to 102.00%. The method's accuracy and repeatability were confirmed by the low % RSD. Experimentation with the method's repeatability, precision, and intra- and inter-day fluctuations showed that it agreed well with %RSD. The suggested approach was determined to be strong and resilient. Levosulpiride, both in bulk and medicinal dose form, may be routinely analyzed using the aforementioned approach.

Keywords:Area under the curve, validation, levosulpiride

Introduction

The anti-psychotic Levo-isomer of sulpiride is known as levosulpiride. Peptic ulcers, anxiety problems, and schizophrenia are among the conditions that it helps

dopaminergic neurotransmission.(3) Functional dyspepsia, psychosis, and depression are common indications for its prescription. Tonini et al. tested the racemic activity and found that the Levo version was more active. Levosulpiride toxicity was investigated

ORIGINAL ARTICLE



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Formulation, characterization and evaluation of nanoparticles based dry powder insufflation containing terbutaline sulphate and itraconazole for the treatment of asthma

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Aerosol dispersion performance,
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ABSTRACT

Many factors affect the pulmonary drug delivery and stability of the nanoparticles an acupuncture consisting of bronchial asthma. Present research envisages on the development of dry powder nanoparticles as insufflation a acupuncture consisting of bronchial asthma (allergy due to *Aspergillus fumigatus*) using physical mixing and spray drying. Different founding are prepared and characterized with suitable excipients like lactose and trehalose. The particle size distribution of nano milled and spray-dried particles of Terbutaline Sulphate and Itraconazole showed unimodal size distribution. The formulations prepared with trehalose as the carrier showed less D_{v90} , D_{v50} and D_{v10}





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IN-VIVO AND STABILITY STUDIES OF DRY POWDER INSUFFLATION CONTAINING TERBUTALINE SULPHATE AND ITRACONAZOLE NANOPARTICLES FOR THE TREATMENT OF ASTHMA

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Keywords:

Asthma, Dry powder insufflation, Terbutaline sulphate, Itraconazole, Pharmacokinetics, Stability

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ABSTRACT: The present research was envisaged on the development of dry powder to treat asthma. Terbutaline sulphate (a bronchodilator) and Itraconazole (an antifungal) were used in the present study for bronchodilation and allergy to *Aspergillus fumigatus* (fungi) using lactose and trehalose as excipients. Dry powder insufflations were prepared by physical mixing (milling) and spray drying, out of which spray dried formulations with lactose as excipient gave the best results *in-vitro*. Hence, spray dried formulations were preceded for further pharmacokinetic and stability studies. The pulmonary concentrations of Terbutaline sulphate and Itraconazole from TER – A (sd), ITR – A (sd), TER: ITR – A (sd) monotonically decreased ($T_{max} = 0$ min). However, Itraconazole showed higher AUC_{0-α} in individual and combined formulation when compared to Terbutaline sulphate

What Limits the Adsorption of Cyclic Prodrugs of Opioid Peptides into Intestinal Cells (DADLE): Part I. The Function of Efflux Transporters in the Mucosa of the Intestine

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Abstract

In this work, we aimed to understand how P-glycoprotein (P-gp) limits the intestinal mucosal permeability of the opioid peptide DADLE (H-Tyr-D-Ala-Gly-Phe-D-Leu-OH) and its cyclic prodrugs (AOA-DADLE, CA-DADLE, and OMCA-DADLE). By incorporating GF-12098, cyclosporine (CyA), or PSC-833, which are recognized P-

DADLE across the intestinal mucosa of rats; other variables, such as substrate activity for other efflux transporters and metabolic enzymes, may also play a role. Copyright 2008 Wiley-Liss, Inc. and the American Pharmacists Association, Journal of Pharmaceutical Science, 98(3), 337–348.

Topics covered include: peptide



A randomized, parallel, open-label clinical study comparing the effectiveness and safety of apremilast with methotrexate in individuals with moderate to severe palm plantar psoriasis.

P.V.Madhava Reddy , A.V.S.Muralidhar Reddy, P.Sailaja ,P.Naresh Babu

Abstract:

Various studies have revealed varying outcomes regarding the safety and effectiveness of apremilast in comparison to methotrexate. Therefore, more research into the function of A prenilast in palmo plantar psoriasis is required. Patients with moderate to severe palmoplantar psoriasis were the subjects of a randomized, prospective, parallel-group, open-label trial. For 16 weeks, they were randomly assigned to either the methotrexate group (n = 19) or the apremilast group (n = 22). Reduced scores on the modified palmoplantar psoriasis severity index (mPPPASI) from week 0 to week 16 served as the primary effectiveness metric. Additional metrics included the percentage of patients who achieved a Static Physician Global Assessment score of 0 (clear) or 1 (almost clear), the percentage of patients who achieved mPPPASI75 (75% reduction in mPPPASI score) by the end of 16 weeks, and the proportion of patients who demonstrated a dermatology life quality index decline of at least 5àpoints from the beginning. At 16 weeks, there was no statistically significant difference between the two groups in terms of m-PPPASI score drop. however there was a significant decline from week 0 to week 16 within the



New obstacles in the continuing opioid epidemic: tapentadol skin popping

K.Sumanth Kumar , P.Sailaja , Yadala Prapurna Chandra, P.Pravallika ,

Introduction

Subcutaneous or intradermal injection of illegal substances is known as skin popping. Some people like this method of using illegal drugs. Intravenous injections may potentially unintentionally burst the skin if the injector is not careful or if the veins are inaccessible because of thrombosis.[1] The opioid market in India is one of the biggest in the world. In the past ten years, there has been a noticeable rise in the worldwide trend of seized prescription opioids. The most common synthetic opioid confiscated between 2016 and 2020 was tramadol. Following its nationalization, both production and confiscated amounts of tramadol in India decreased. Nevertheless, there is a lack of prevalence statistics on tramadol usage, and the trafficking of this drug persists. In certain locations, the more established opioid tramadol is being replaced with the more recent opioid tapentadol.[2] in Rare cutaneous nodules caused by tapentadol skin popping have been reported.

A 30 year old man who had been taking tapentadol for chronic pain...

Research on the Efficiency and Results of Clinical Pharmacist-Administered Educational Inhaler Technique Counseling in the Respiratory Department

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B.Kumar, B.Naveena & P.Sindhu

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Muthukur (M), SPSR Nellore Dt.- 524346 A.P., India.

ABSTRACT

Background: Proper inhalation technique is essential for the most effective delivery of inhaled medicine to the lungs and is a key component determining the efficacy of inhaled medication. Because of how important it is for patients with respiratory diseases to know how to use the inhaler correctly, we performed this research to evaluate technique and educate on inhaler methods. **Research Tools and Procedures:** From October 2019 to March 2020, researchers from Dhiraj Hospital's Department of Respiratory Medicine in Vadodara carried out a cross-sectional interventional study. The procedure for inhalation was assessed using a dedicated checklist developed by the NHS Liverpool Clinical

around 3 million lives annually, affecting an estimated 65 million individuals. With an estimated 334 million cases worldwide, asthma is by far the most prevalent chronic illness. One of the leading killers for quite some time now is acute infection of the lower respiratory tract. While 10.4 million people are infected with TB, and 1.4 million succumb to the disease annually, one, two One important tool in the treatment of respiratory illnesses, especially asthma and chronic obstructive



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Advances in oral chitosan based nano delivery system for colon targeted drug delivery in inflammatory bowel disease

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Abstract

Nanomaterials can be used as drug carriers with multiple features, including target delivery triggered by environmental, pH, thermal responses, enhanced biocompatibility, and the ability to cross the blood-brain barrier. Chitosan (CS) is a natural polysaccharide largely obtained from marine crustaceans. It provides drug delivery vector for therapeutic CS and diagnostic CS, owing to its biocompatibility, biodegradability, low toxicity, and structural variability. Derivatives of CS such as quaternized CS, thiolated CS and carboxylated CS have enhanced its effectiveness in oral absorption of macromolecular drugs. This review discusses different forms of nanomaterials generated from CS and its derivatives for controlled drug delivery.

Keywords

Chitosan, Crustaceans, Biocompatibility, Controlled drug delivery.



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FORMULATION AND OPTIMIZATION AND *IN VITRO* CHARACTERIZATION OF
OLANZAPINE LIPOSOME

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ABSTRACT

Objective: Olanzapine (OZ) is a thienodiazepine class second-generation or atypical antipsychotic that selectively binds to central dopamine D₂ and serotonin (5-HT_{2c}) receptors used for the treatment of schizophrenia and bipolar disorder. The present paper is aimed at developing an optimized liposome-loaded OZ as an approach for brain targeting through the nasal route for effective therapeutic management of schizophrenia.



POTENTIAL OF URAI MATHIRAI (PEDIATRIC SIDDHA FORMULATION) FOR THE PROPHYLAXIS AND MANAGEMENT OF COVID-19 IN CHILDREN

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AUTHORS' CONTRIBUTIONS

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Research Article

Formulation and Evaluation of Lamivudine Nanosuspension

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Dr. Yerikala Ramesh, M.Pharm., Ph.D., Associate

Abstract

The present research aimed to develop & Evaluation of Lamivudine Nanosuspension. Lamivudine is a potent *in vitro* inhibitor of human immune deficiency virus belongs to the category of anti-retroviral drugs. The formulated Nanosuspension was subjected to various evaluation parameters like particle size, polydispersity index, zeta potential, drug content, viscosity, saturation solubility studies, *In vitro* release, treatment of kinetic data, and stability studies. The polydispersity ranged from 0.218 PDI to 0.331 PDI and zeta potential ranged from -1.60 mV to -4.79 mV are the important evaluation parameters are responsible for the stability of nanosuspensions. The Polydispersity index presents the quantity of particle size distribution ranges from 452.4 nm to 532.2 nm. In this result, LNSF4 shows spectacular drug content range of 86±1.8% to 97±2.5% it is the maximum drug content. The Brook field viscometer to determine the viscosity of Lamivudine Nano suspension of different formulations was found to be 44.4±2.1 cps to 87.7±1.4 cps. The general Nanosuspension formulations LNSF4 shows 98.64 % better controlled released in comparison with abundant formulation. In all the cases the best-fit model encounter upto be peppas with 'n' value between 0.768 to 0.917. The 'n' value of formulation LNSF4 was 0.876 and suggesting so the drug was released by Zero-order kinetics. Acceleration stability studies intermediate storage condition has been changed from 20°C ± 2°C and 60% RH ± 5% Relative Humidity. After 30

Improving the Precision of Ibuprofen Free Acid and Its Salts in Vitro Dissolution Assays

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ABSTRACT

Researchers have questioned the predictive potential of in vitro dissolving tests for BCS class 2 weak acids utilizing the Bio pharmaceutics Classification System (BCS) as an experimental design to predict in vivo bioequivalence results. As a potential strategy for guaranteeing the discriminative capability of the in vitro dissolving techniques, this study examined the influence of buffer concentration media. Various salt forms of ibuprofen, as well as the free acid, were used to evaluate this method. In order to improve the discriminative power of the in vitro dissolution tests, the concentration of buffers used to prepare media that mimic intestinal conditions was adjusted to match that of bicarbonate buffer, the most common species of buffer in living organisms, so that both sets of samples reached the same surface pH (pH0). In order to enhance the resemblance to the in vivo findings, a two-stage test was combined with a pretreatment at an acidic pH to mimic the circumstances in the stomach. In order to more accurately represent the in vivo performance of the different formulations, the 2-stage test allowed for a more physiologically realistic accounting for variations in disintegration.

Introduction



Skin cancer patients undergoing etoposide, prednisolone, vincristine, and cyclophosphamide therapy may have hyperpigmentation of the teeth and tongue.

E.Rajini , Yadala Prapurna Chandra , K.Sumanth Kumar , P.Sailaja

Abstract

Chemotherapeutic medicines such as etoposide, vincristine, and cyclophosphamide are often used to treat the uncommon malignancy known as cutaneous extranodal non-Hodgkin lymphoma. These drugs very infrequently produce hyperpigmentation in the skin and nails. Here, however, we report an instance of hyperpigmentation that spread to the teeth and tongue. It wasn't long after chemotherapy started that the tongue and teeth began to hyperpigment. No pharmaceutical, surgical, or lifestyle therapies were necessary for the hyperpigmentation to resolve itself within a week.

Search Terms: Hyperpigmentation, cyclophosphamide, teeth, and tongue

Malignant T cells infiltrating the skin is a hallmark of cutaneous T-cell lymphomas,

examinations, supplementary testing (such as CD4 cell identification), and other criteria



Phytochemical analysis, traditional applications, Pharmacology and toxicity of *Thymus serpyllum*

P.NareshBabu , P.V.Madhava Reddy, Sk.Saleha Nageena, Sk.Phareedha

Abstract:

The Lamiaceae family understudied perennial plant *Thymus serpyllum* L. has a long history of use in the treatment of gastrointestinal and respiratory disorders in the higher foothills of India. Our present understanding of *T. serpyllum* traditional applications, phytochemistry, and pharmacology is not well-rounded, and that is the goal of this review. Gathering up-to-date knowledge on this plant is our top priority, as is promoting more in vivo and in vitro studies to back up local claims. Due to its varied pharmacological qualities, such as antioxidative, antibacterial, anti-inflammatory, and anticancer activity, the essential oil extracted from *T. serpyllum* has garnered substantial interest as a plant-derived product. When it comes to creating novel medications to tackle a wide range of health sector issues, ethnomedicinal research has shown that *T. serpyllum* has a lot of potential. Pharmacological investigations alone are insufficient to support the widespread usage of *T. serpyllum*. In most cases, researchers use either in vitro or in vivo methods. To evaluate these medical assertions, more research is needed in the form of carefully orchestrated pharmacological trials. The findings of this evaluation will serve as a springboard for more studies. Despite *T. serpyllum* extensive traditional usage, there has been a dearth of pharmacological research, with the majority of investigations conducted in either in vitro or in vivo settings. Important topics to explore include further chemical isolation, thorough pharmacological study, and potential culinary uses.

The Developability Classification System: Application of Biopharmaceutics Concepts to Formulation Development

Venugopalaiah Penabaka, P Venkata Anudeep*, Yerikala Ramesh, D. VijayKumar, S. Ramesh
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ABSTRACT

A revised classification system for oral drugs was developed using the biopharmaceutics classification system (BCS) as a starting point. The revised system is designed to have a greater focus on drug developability. Intestinal solubility, the compensatory nature of solubility and permeability in the small intestine and an estimate of the particle size needed to overcome dissolution rate limited absorption were all considered in the revised system. The system was then validated by comparison with literature on the *in vivo* performance of a number of test compounds. Observations on the test compounds were consistent with the revised classification, termed the developability classification system (DCS), showing it to be of greater value in predicting what factors are critical to *in vivo* performance than the widely used BCS.

INTRODUCTION

Examination of the rectangle apparatus developed by Asyogh for the purpose of assessing memory and learning in Wistar rats

Yadala Prapurna Chandra , P.Sailaja , P.Venkureddy , P.Punitha

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Abstract

The purpose of this research was to develop an improved version of Asyogh's rectangle gadget for evaluating rodent memory. Increased transfer latency times shown that rats significantly impaired in memory when administered scopolamine (3 mg/kg i.p.) and diazepam (1 mg/kg i.p.). But when the rats were given Donepezil beforehand, their memory problems disappeared. Thanks to the considerable improvement in TLT, it's clear that pretreatment donepezil may successfully reverse the memory impairments caused by scopolamine and diazepam. This research demonstrated that the device used to detect transfer delay time was an effective instrument for evaluating cognitive function and memory in rats.

keywords: Introducing Asyogh's rectangle device—a groundbreaking tool for assessing learning and memory



Method Development and validation on the stability of Lafutidine and domperidone in capsules

AngalaPrameswari ,P.Prabhavathi ,

M.Suchitra&K.Sailekhya

Abstract

For the purpose of determining the concentrations of Lafutidine and Domperidone in Lafutidine and Domperidone sustained release capsules, a straightforward, sensitive, accurate, and specific high performance liquid chromatographic technique was created and validated. A mobile phase consisting of a 30:70 ratio of acetonitrile to pH 6.5 phosphate buffer was used to carry out the separation. A UV detector operating at 276 nm was employed with an Xterra column of 250mm X 4.6mm, 5 μ , and a flow rate of 1 ml/min. Domperidone had a retention duration of 15.5 minutes and Lafutidine 7.0 minutes. Recovery investigations (mean recovery = 99.94) and statistical validation of analytical data confirmed the degradation research of Lafutidine and Domperidone in capsule form under conditions of hydrolysis, oxidation, heat, and photolysis. The study's results shown that the suggested approach is effective for the routine determination of Lafutidine and Domperidone in pharmaceutical dose form since it is simple, quick, precise, and accurate.

Keywords:Method development, validation, and forced degradation using lafutidine and domperidone.

Introduction

Lafutidine is 2-[(2-furylmethyl)sulfinyl]-N-((2Z)-4-{[4-(piperidin-1-ylmethyl)pyridin-2-yl]oxy}but-2-en-1-yl)acetamide (Fig.1). It is a gastroprotective and anti-ulcer drug, which selectively blocks H₂ receptors. Physical properties are white crystalline powder

dihydro-1H-benzo[d]imidazol-1-yl)propyl piperidin-4-yl)-1H-benzo[d]imidazol-2(3H)-one (Fig.2). It is an antiemetic drug, which selectively blocks CTZ receptors. Physical properties are white crystalline powder, soluble in 0.1N HCl. This paper describes validated HPLC method for estimation of Lafutidine and Domperidone

*In Vivo and In Vitro evaluation of Immunomodulatory Potential
Of Cassia auriculata Linn's*

G.BuelaPriyanka, M.Gobinath, Sk.Salma& V.Haribaskar

Abstract

The current research set out to examine Cassia auriculata Linn's immunomodulatory potential both in vitro and in vivo. The immunomodulatory ability of plant methanol extracts was examined in a number of in-vitro models, as well as in an in-vivo model of oxazolone-induced cell-mediated inflammation in rats. Scientifically, several activity models were used to screen methanolic extracts of roots and flowers. Methanolic floral extract has immunomodulatory activity, as shown by oxazolone-induced cell-mediated inflammation. On the other hand, methanolic floral extract exhibited dose-dependent stimulation in in-vitro immunomodulatory models such as the NBT reduction test using human PMN cells. The phagocytosis of Candida albicans by human PMN was also seen using the same extract. A dose-dependent rise in candidacidal activity was also seen in the methanolic floral extract. The methanolic floral extract showed stronger effects than the positive control in inducing chemotaxis of human PMN cells. This means that methanolic floral extract has an immunostimulant effect in vitro, and it dramatically decreased rat ear edema in a dose-dependent way in an in-vivo investigation of oxazolone-induced delayed type hypersensitivity. Because of its antioxidant capability, the in-vitro tests showed that methanolic floral extract has strong immunomodulatory activity. All things considered, the data shown here suggest that Cassia auriculata has strong immunomodulatory action with its purported cytoprotective benefits. In chronic inflammatory conditions like rheumatoid arthritis, for example, a methanolic floral extract high in flavonoids may be used to lessen the dosage and dose-related toxicities of conventional medications.

Keywords:Cassia auriculata, oxazolone, immunomodulatory, NBT test

Introduction

*Wild in central and western India, the evergreen shrub
Cassia auriculata Linn. has numerous brilliant yellow*

is popular in Sri Lanka because to its favorable

Experimental Investigation of Hepatoprotective Agents and Antimicrobials for the Management of Liver Disorders: A Cross-Sectional Study

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ABSTRACT

Background: One of the world's leading causes of mortality, liver illnesses have far-reaching repercussions in society, the economy, and medicine. Our primary objective is to raise awareness of liver disease symptoms and consequences while simultaneously decreasing the likelihood of illness and assessing the efficacy of hepatoprotective medicines and antimicrobials. Research Tools and Procedures: This 55-patient cross-sectional research took place over the course of six months.

INTRODUCTION

Another name for liver illness is hepatic disease. When the liver's normal functions are impaired, it leads to illness, which is called liver disease. Common symptoms of liver illness include jaundice, swelling, abdominal discomfort, edema, itchy skin, dark urine, pale, bloody, or tar-colored feces, chronic lethargy, nausea, vomiting, anorexia, and an easy bruising propensity.¹ Liver disease



Travel medicine - An all-inclusive manual for risk-free global travel

P.Sailaja , Yadala Prapurna Chandra , E.Rajini , K.Sumanth Kumar

In today's globally interconnected world, travel is an essential part of living a modern life. Whether for humanitarian, commercial, or travel-related reasons, millions of people cross international borders daily. It is essential to acknowledge the role of travel medicine in protecting our well-being and improving global health as we eagerly anticipate experiencing other cultures and ecosystems. Travelers are urged to prioritize their health and safety, and the significance of travel medicine is emphasized in this article. Worldwide public health officials have faced difficulties due to the fast proliferation of infectious diseases in the last decade. These include drug-resistant Mycobacterium TB, severe acute respiratory syndrome virus, new strains of influenza virus, and others. Despite this staggering amount, 200 IFMEs occur daily on a worldwide scale, with one major IFME affecting every 10-40,000 passengers and around 0.35 deaths per million arriving passengers each year. [2] About 67% of IFMEs are due to previous medical conditions, which is increasing as the population ages and more people reach retirement age. The third Travelers serve as early warning systems for infectious illnesses, but they also pose a threat of spreading diseases that often manifest in developing nations. Clinics that specialize in tropical medicine and travel medicine are the best sites to detect novel infections and monitor evolving trends in travel-related illnesses. 1,3

Medicines for Traveling to Other Continents or Vaccinations

Geographical monitoring of travel-related disorders is conducted by GeoSentinel sites, which are specialist travel medicine clinics spread across six continents. In a study of over 17,000 ill tourists, GeoSentinel found many global health risks, including typhoid in South Asia, dengue in the Caribbean, Central America, and Southeast Asia, and African tick-typus in Southern Africa. [4]



Research article

Nano-sized Liposomes for nose to brain delivery of Carmustine Formulation, Optimization by Box Behnken designM Alagusundaram¹, K B ChandraSekhar², G Nethra Vani^{3*}¹ ²Department of Pharmaceutics, Ratnam Institute of Pharmacy, Nellore, Andhra Pradesh³Department of Chemistry, Jawaharlal Nehru Technological University, Anantapur, Andhra Pradesh³Department of Pharmaceutical Sciences, Jawaharlal Nehru Technological University, Anantapur, Andhra Pradesh**ABSTRACT**

Successful treatment of glioma remains a hard challenge. This study aims at the development and assessment of nano sized liposomal vesicles (NSL) loaded with Carmustine (CS) for the treatment of glioma. The experimental NSLs were developed by conventional lipid layer hydration technique and were characterized by different parameters such as % Entrapment efficiency, zeta potential, scanning electron microscopy (SEM), transmission electron microscopy (TEM), *in vitro* drug release study. The optimized Carmustine nanosized liposomes (OCS-NSLs) presented the practical values of % EE of CS is $94.27 \pm 0.25\%$, particle size of 235.65 ± 12.87 nm and *in vitro* drug release of CS $97.089 \pm 1.76\%$. On the base of the polynomial equation, it was resolved that as the total lipid to drug concentration increases, the % EE of optimized formulation and this leads to more space for the accommodation of drug particle, likewise addition of lipid content as well reduces the escaping of drug into the external phase. OCS-NSLs were spherical in shape with a smooth surface as depicted from SEM data. A TEM study confirmed formation of vesicles with intact outer bilayer. *In vitro* drug release of $95.67 \pm 1.54\%$ was reported for the OCS-NSLs along with a sustained release of CS over a 24 h study period with desired kinetic values. Hence, the optimized formulation has shown a better response on Carmustine loaded nano liposomal formulation for intranasal application.

Keywords: Carmustine, Glioma, Nanosized lipid vesicles. New drug delivery, CNS.

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Isolation Of Anti-Inflammatory And Anti-Diabetic Principles From The Leaf Extract Of *Premna Tomentosa*

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Abstract

Diabetes and inflammation are most common and inter related disorders that damage human organs like liver, cardiovascular system, nervous system and urinary system which result in temporary and permanent disability to human beings. In spite of the efficacy of existing drugs that contain both anti-inflammatory and antidiabetic potential there are significant side-effects too. Thus interest to identify drugs from herbal origin to effectively treat both the disorders simultaneously. Therefore this research focusses on isolating and identifying active chemical constituents from *Premna tomentosa* leaves. Dried leaves were extracted using methanol and further fractionation was performed in column chromatography using dichloromethane and ethanol as mobile phase. 9 fractions were eluted which were tested for invitro cytotoxicity, anti-inflammatory activity against LPS induced inflammation in RAW 264.7 macrophage cell lines and inhibition of α -amylase. Fractions found to inhibit the toxicity of LPS on cell lines at 25 μ g/mL. out of the fractions tested, Fraction 7 and 8 showed the highest activity with % cell viability of 99.651 ± 1.001 and 95.362 ± 0.994 respectively by inhibiting LPS. Fraction 7 and 8 showed the best inhibition at IC_{50} of 280.387 and 265.411 respectively. Fraction 7 resulted best activity in all the activities which was further fractionated using dichloromethane, chloroform and ethanol. Isolate 2 showed the best inhibition with IC_{50} of 292.376. out of the isolates from Isolate 2 Isolate 2a showed a least IC_{50} of 286.356 which infers best inhibition on α -amylase. Isolate 2a was confirmed

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FORMULATION OF ZIDOVUDINE PRONIOSOMES FOR ORAL DRUG DELIVERY
SYSTEM

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**SYNTHESIS OF CHITOSAN BASED NANOPARTICLES AND
EFFICACY OF CORTICOSTEROIDS AND AMINOSALICYLATES
FOR THE TREATMENT OF INFLAMMATORY BOWEL DISEASE**

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ABSTRACT



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Role of the Extracellular Matrix Components in Cutaneous Wound Healing

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ABSTRACT

Anti-inflammatory seems to be the metabolic rebuttal of between cells wounds progressing like a sophisticated continuum sure biochemical processes but instead epithelial occurrences, naturally produced progenitor cells, but rather pro inflammatory cytokines. Collagen fibres electorate seem to be vital aspects of such bone healing sociological phenomena. So first, individuals establish someone temporary residency mixture that provides some one sturdiness sure multiversity throughout every step yeah healing time. Secondly, structure particles govern cell function, resolve that whole device but instead cell-matrix connections, and function positive water supply or modulated signal like chemokines or gene productal...
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FORMULATION & *IN-VITRO* EVALUATION OF SUSTAINED RELEASE TABLETS OF FROVATRIPTAN FOR THE TREATMENT OF MIGRAINE

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REVIEW ARTICLE

Recent advancement in Nano-drug delivery for Topical Wound Healing

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ABSTRACT:

Advanced technology is needed for quicker and better wound healing management by minimizing infection, keeping moisturizing the wound surface, speeding up tissue growth, and reducing infection at the specific area. The advancement of drug delivery in nano form is gradually increasing and shows a greater response towards healing wounds. The drug's in nano shape potential to hold the drug and facilitate rapid targeted effect in tissue growth and repair. Research outcomes confirm that shortcomings of the traditional form of dosage may be revived by nanomedicine because of its better target-specific application for wound treatment. The present analysis concentrated on further growth and applicants for medications in nano form targeting to accelerate healing of wound treatments for a different wound style. The latest development in nanomedicine has been created by different researchers in the shape of nanoparticles, niosomes, dendrimers, nanosomes, hydrogels, liposomes, and micelles, etc. which emphasize clinical value and provide better therapeutic benefits. Past few years significant development has been observed on nanomedicines to satisfy the clinical needs for chronic and wounds that are diabetic. The occurrence of wounds nonhealing gradually increasing which affects the patient mentally and financially. This current review article summarized with latest developments within the area of nanomedicine, which dramatically expanded its clinical value towards wound healing.

KEYWORDS: Inflammation, Wound Healing, Cell Proliferation, Nanomedicine, Liposomes, Niosomes.

Development of an Analytical Method and Validation of Exemestane Tablet by UV Spectrophotometry

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ABSTRACT

This chapter discusses the development and validation of a UV spectrophotometric method for the estimation of Exemestane tablets. The determination of exemestane in tablet dosage form has been created using a straightforward, accurate, and economical spectrophotometric approach. The ideal circumstances for the drug's analysis were developed. The maximum wavelength (λ max) was found to be 246 nm. The percentage recovery of Exemestane was noticed to be 98.7 ± 0.4 . Beers law was obeyed in the concentration range of 2-14 $\mu\text{g/mL}$. The absorbance and concentration have a linear relationship, according to calibration curves. The line equation $y=0.05954x+0.0000$ with r^2 of 0.9938 was obtained. Validation was carried out in accordance with ICH guidelines for linearity, accuracy, precision, LOD, and LOQ. The sample solution was stable for 36 hours. The suggested technique may be appropriate for the study of Exemestane in tablet formulation for quality control purposes.

Keywords: Exemestane; UV method; validation; ICH guidelines.

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PREPARATION AND IN-VITRO EVALUATION OF SODIUM ALGINATE MICROSPHERES LOADED WITH SAXAGLIPTIN

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PREPARATION AND EVALUATION OF VIGABATRIN MICROSPHERES MICROSPHERES LOADED WITH SAXAGLIPTIN

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