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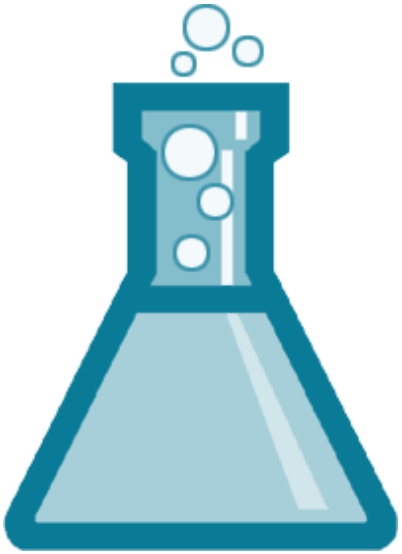

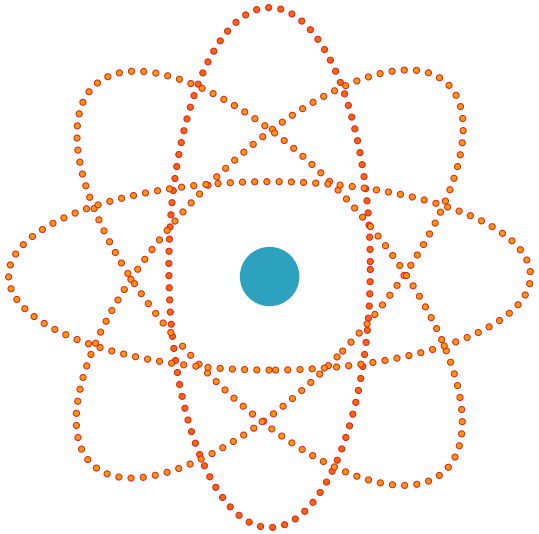

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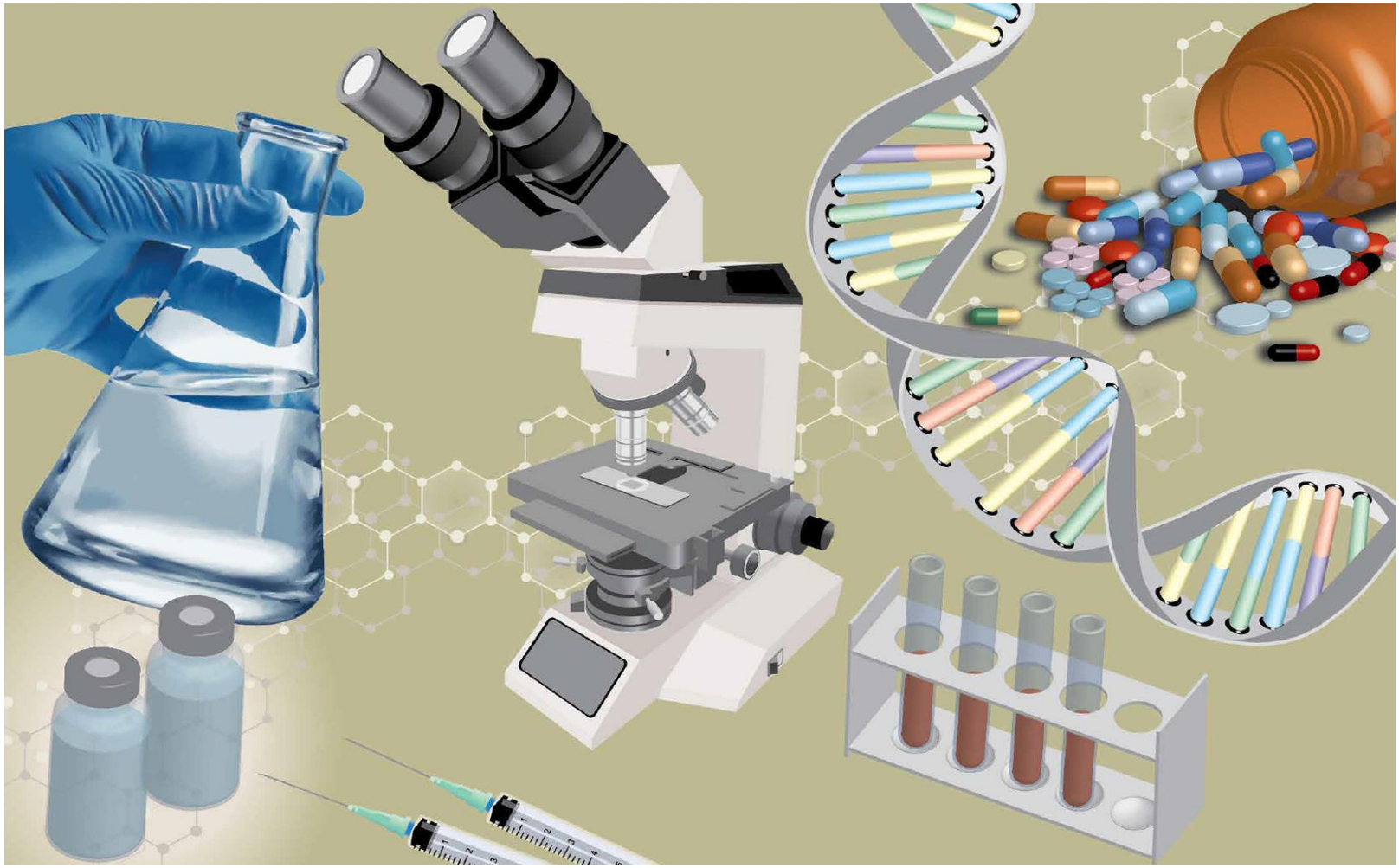

DIURETIC ACTIVITY OF METHANOLIC EXTRACT OF THE WHOLE PLANT OF WITHANIA SOMNIFERA IN RATS

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Objective: The objective of the present study is to evaluate the diuretic activity of the methanolic extract of WithaniaSomnifera whole plant extract in rats. Rats were randomly divided into five groups each comprising six rats.

Methods: Group I served as negative control and received distilled water 10 ml/kg, Group II served as a positive control and was given a standard drug 10mg/kg hydrochlorothiazide, Group III, IV and V were test groups and received 100, 200 and 400 mg/kg of methanolic extract of , respectively. Urine output was collected up to 24 hr and WithaniaSomnifera analyzed for electrolytes. The methanolic extract of increased diuresis significantly at the Results: WithaniaSomnifera doses of 200 and 400 mg/kg ($p<0.01$). Regarding electrolyte excretion, 400 mg/kg of methanolic extract had increased Na , K , Cl ($p<0.01$) when compared with the standard. Phytochemical analysis revealed the presence of secondary + + + metabolites like alkaloids, flavonoids, tannins, terpenoids, flavonoids and saponins, which could be the responsible components for the diuretic activity.

The results of the present study indicated that the plant is enriched Conclusion: with significant diuretic activity providing evidence for its traditional claim. The increased diuresis effects of the crude extracts may be attributable for presence of increased phytoconstitutents.

Keywords: Withania somnifera,electrolyte excretion, flavonoids, diuresis

REVIEW ARTICLE ON BRUGADA SYNDROME

SajjaRavindraBabu, Mehraj Fatima and Balusupati Anjali Venkata Lakshmi*

Brugada Syndrome is a rare but serious condition that affects the way electrical signals pass through the heart. The causes include mutation of SCN5A gene most of which are inherited in an autosomal dominant manner from parent to their children. Other causes include structural problem in heart imbalance in chemicals that help send electrical signals through the body. The prevalence of Brugada Syndrome is approximately 3 to 5 per 10,000 people. There are three types of Brugada Syndrome. Risk factors include family history, male, Asians, fever. Dizziness, fainting Gasping and labored breathing, palpitations are symptoms. It is diagnosed with ECG, electrophysiological testing and mapping and Molecular genetic (DNA) testing. Use OTC medications to help bring fever down, stay hydrated. Quinidine, Isoproterenol, Cilostazolare the medications. Device Therapy and Catheter ablation are other procedures for treating Brugada Syndrome. In this article I discuss about the Brugada Syndrome, epidemiology, etiology and pathophysiology, types, risk factors, symptoms, diagnosis and treatment of BrugadaSyndrome.

Keywords: Brugada Syndrome, Molecular genetic (DNA) testing, Quinidine, Device Therapy.

ANTIARTHRITIC ACTIVITY OF POGOSTEMON QUADRIFOLIUS

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To investigate anti-arthritic activity of Aqueousmethanolic extract of Pogostemonquadrifolius (AMEPQ) in Freund's complete adjuvant (FCA)-induced arthritis in rats. Methods: The AMEPQ was prepared and subjected to acute oral toxicity in mice and tested against FCA induced arthritis in rats. Arthritis assessment was done by measuring – paw volume, joint diameter, pain threshold, thermal hyperalgesia, mechanical nociceptive threshold and body weight. Haematological, serum, biochemical and in vivo anti-oxidant parameters were measured on the last day of the study. Histopathological and radiological analyses of ankle joints were also done. MEPQ was administered at the dose of 100, 200 and 400 mg/kg body weight. Results: MEPQ dose dependently showed anti-arthritic activity which was evident with decrease in paw volume, joint diameter and increase in pain threshold, paw withdrawal latency, mechanical nociceptive threshold and body weight when compared to arthritic control group. AMEPQ (400 and 200 mg/kg) exhibits significant ($P < 0.001$ and $P < 0.01$, respectively) anti-arthritic activity by increasing levels of RBC, Hb and by decreasing levels of WBC, platelets and also serum C-reactive protein (CRP) and Rheumatoid factor (RF). The anti-arthritic activity was also confirmed with the altered biochemical parameters (AST, ALT, ALP and total protein level) and anti-oxidant parameters (SOD, MDA and GSH). MEPB (400 and 200 mg/kg) and diclofenac (10 mg/ kg) also inhibited joint destruction (histopathological and radiological analysis). Conclusion: P. quadrifolius may be a potential preventive or therapeutic candidate for the treatment of inflammation and arthritis.

Keywords: P. quadrifolius, Anti-atthritic activity, Methanol, Freund's complete adjuvant

PHYTOCHEMICAL ANALYSIS AND INVITRO ANTIMICROBIAL ACTIVITY OF LEAF EXTRACT OF ALLAMANDA CATHARTICA

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To investigate Phytochemical analysis and in-vitro antimicrobial activity of leaf extract of *Allamandacathartica* linn Plants have been the major source of drugs in medicine and other ancient systems in the world. In traditional systems of medicine, Indian medicinal plants have been used in the successful management of various disease conditions. *Allamandacathartica* (AC)Linn. (Apocynaceae) is one of the most studied species of the Allamanda genus. This method has been by using aqueous methanol(80% solvent) and was evaluated for phytoconstituents present in them so the preliminary phytochemical screening method was done with the help of standard literature. The Aqueous Methanolic extract of AC consists of alkaloids, carbohydrates, glycosides, tannins, phytosterols, flavonoids, and phenols. So the present study provides evidence that it is having a moderate antimicrobial effect on organisms *E coli, Strephylococcus aureus,* and *candid albicans Allamandacathartica* contains medicinally important bioactive compounds and it is having a moderate antimicrobial effect on organisms *E coli, Strephylococcus aureus*, *Candida albicans*. We suggest for extensive research studies on the plant and formulations should be encouraged with proper evaluation.

Keywords: Allamanda cathartica, Antimicrobial activity, Phytochemicals, zone of inhibition

STABILITY INDICATING BIOANALYTICAL VALIDATION OF ELEXACAFTOR, IVACAFTOR AND TEZACAFTOR USING HPLC IN HUMAN PLASMA

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A simple, precised, accurate method was developed for the estimation of Elexacaftor, Ivacaftor and Tezacaftor in human plasma using the Lumacaftor as internal standard by RP-HPLC (Reverse phase-High performance Liquid Chromatographic) technique. Chromatographic conditions used are stationary phase Azilent (250 x 4.6mm, 5m), Mobile phase 0.01N Potassium di-hydrogen phosphate (pH: 3.5) : Acetonitrile in the ratio of 70:30(v/v) and flow rate was maintained at 1.0ml/min, detection wave length was 250nm, column temperature was set to 30oC and diluent was mobile phase Conditions were finalized as optimized method. Retention time of Ivacaftor, Elexacaftor and Tezacaftor were found to be 2.391min, 3.208min and 3.644min. %CV of the Elexacaftor, Ivacaftor and Tezacaftor was found to be 0.08%, 1.05% and 3.59%. %Recovery was obtained as 96.41%, 95.029% and 98.21%. The linearity concentration is in the range of 435-17400ng/mL of Elexacaftor, 60-2400ng/mL of Ivacaftor and 300-1200ng/mL of Tezacaftor (r2 = 0.999) .The lower limits of quantification were 435ng/mL of Elexacaftor, 600ng/mL of Ivacaftor and 300ng/mL of Tezacaftor which reach the level of both drugs possibly found in human plasma. Further, the reported method was validated as per the ICH guidelines and found to be well within the acceptable range. The proposed method is simple, rapid, accurate, precise, and appropriate for pharmacokinetic and therapeutic drug monitoring in the clinical laboratories.

Analytical Method Development and Validation of Cephalexin and Carbocisteine by RP-HPLC K. Pooja1 , S. Marakatham2 , B. Raj Kamal3 1,2,3 Pharmaceutical Analysis Department, Malla Reddy Institute of Pharmaceutical Sciences, Maisammaguda, Dulapally Post, Medchal Mandal, T.S, India

Carbocisteineand Cephalexin were measured and quantified using a quick, sensitive, and precise RP-HPLC approach that was designed and validated using the Waters HPLC System with PDA detection. Chromatography was performed using a mobile step of filtered, mixed, degassed Methanol: Water (30:70) on a column of Inertsil-ODS C18 (250 x 4.6 mm, 5) at a flow rate of 1.0 ml/min. In addition to being tested for quantification and detection limits, the system was also examined for linearity, precision, accuracy, and specificity. Main words: Cephalexin, Carbocisteine, Process development and validation.

METHOD DEVELOPMENT AND METHOD VALIDATION FOR ESTIMATION OF RILPIVIRINE AND CABOTEGRAVIR BY USING RP-HPLC METHOD

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A simple, Accurate, precise method was developed for the simultaneous estimation of the Rilpivirine and Cabotegravir in Tablet dosage form. Chromatogram was run through Ascentis (4.6x 150mm, 3.8µm). Mobile phase containing Buffer 0.01N K2HPO4. Acetonitrile taken in the ratio 55:45 was pumped through column at a flow rate of 1.1 ml/min. Buffer used in this method was 0.01N K2HPO4 buffer. Temperature was maintained at 30ºC. Optimized wavelength selected was 252 nm. Retention time of Rilpivirine and Cabotegravir were found to be 2.169min and 2.746 min. %RSD of the Rilpivirine and Cabotegravir were and found to be 0.9 and 0.6 respectively. %Recovery was obtained as 99.58% and 99.84% for Rilpivirine and Cabotegravir respectively. LOD, LOQ values obtained from regression equations of Rilpivirine and Cabotegravir were 0.07, 0.21 and 0.04 0.12 respectively. Regression equation of Rilpivirine is y = 18241x + 1968.1, and of y = 11344x + 847.95 Cabotegravir. Retention times were decreased and that run time was decreased, so the method developed was simple and economical that can be adopted in regular Quality control test in Industries.

Keywords: Cabotegravir, HPLC, Method Development, Method Validation, Rilpivirine, Simultaneous Estimation Method, Stability studies.

A STUDY ON GRANULES FOR ORAL SUSPENSION OF FIXED DOSE COMBINATION OF ANALGESIC ACTIVITIES

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Paracetamol and Mefenamic acid Granules for Oral Suspension formulation was prepared by granulation method. These two drugs are used as analgesics and the combination of the drug will increase the pharmacological activity. The formulations were prepared based on the release of the drug and taste of the suspension. These granules have shown increased bioavailability. The solubility of the drug can be increased. The granules formed by wet granulation using rapid mixer granulator have greater drug release. This type of formulation is not available in market. The drugs Paracetamol and Mefenamic acid are compatible with each other. The dosage form is Granules for Oral Suspension, so it should be dispensed in sachet, a readily available dosage form, which does not Effect the stability of drug. It is a unit dosage form, so it avoids over dosing. The drug release was rapid and has good pharmacological action.

FETO MATERNAL AND NEONATAL COMPLICATIONS ASSOCIATED WITH HYPOTHYROIDISM IN PREGNANCY

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Objective: To analyze and report the maternal, fetal, and neonatal complications in Antenatal hypothyroid women and to give the frequency of the co-existence of Anemia with Hypothyroidism in pregnancy.

Methods: A Prospective and an observational study was conducted on 200 Antenatal hypothyroid women admitted to the Obstetrics ward. In the period of 6 mo (August 2022-January 2023), the study was carried out through the examination of medical records of Antenatal women with Hypothyroidism.

Results: Of 200 Antenatal hypothyroid women enrolled in the study, Denovo Hypothyroidism was seen in 56% of women. Maternal complications reported include–(Lower Segment Cesarean Section) LSCS seen in 54.5%, Preeclampsia in 19%, mild anemia in 28%, (Post-Partum Hemorrhage) PPH in 7.5%,(Premature Rupture Of Membranes) PROM in 11.5%, Oligohydramnios in 24.5% of women. Fetal complications found were in fetal distress in 21%, in 32.5 %, Respiratory distress in 17.5%, and Low birth weight in 16% of Neonates.

Conclusion: Our study concludes that the number of pregnant women affected by Hypothyroidism has increased to a larger extent. Hence, the suspected risk factors of Hypothyroidism have to be addressed and monitored closely to decrease the rate of feto-maternal and neonatal complications in pregnancy, vital for the overall well-being of hypothyroid mothers and their babies.

Keywords: Hypothyroidism, Preeclampsia, Feto-maternal complications, Neonatal complications, Risk factors, Antenatal hypothyroid women

DESIGN AND CHARACTERIZATION OF ETANERCEPTNONOGEL FOR PSORIASIS TREATMENT

Bandameedi Ramu, K Kishore, B Rama, L Rani

Transdermal delivery of drug is promising but challenging system is available for local as well as systemic effect of drug. The prolonged residence of drug formulation in the skin is important for transdermal drug delivery. The present research work was aimed to develop a novel gel for Etanercept (Act) to enhance the drug absorption by the topical application, which overcomes the demerits of oral dosage form and conventional gel system of Etanercept (Act). The objective of the present investigation was to develop a nanogel with reduced particle size in order to improve the bioavailability of the anti-psoriatic drug, Etanercept. The present study is to formulate nanosizes dispersion of Etanercept by emulsion-solvent diffusion method and incorporation of gelling agent to produce nanogel. The formulations are characterized for particle size ranging from 100-400 nm. A drug named Etanercept used Psoriasis diseases. Glycerol: Water (20:80) co-solvent system is selected for preparing Etanerceptnanogels using different polymers and has better permeability coefficient than alcohol: water co-solvent. Permeation through cellophane membrane was carried using 0.9% w/v sodium chloride using receptor fluid in Franz diffusion cell (1.74 cm2). Gels containing Etanercept with Eudragit polymer shown better permeability coefficient. Etanerceptnanogels formulated using carbopol with permeation enhancer has shown better flux enhancement in comparison with nanogels formulated using HPMC and methyl cellulose. It has been concluded that Etanerceptnanogels using carbopol 940 as gelling agent and Eudragit S-100 has shown better flux enhancement with propylene glycol as permeation enhancer.

RP-HPLC METHOD DEVELOPMENT AND VALIDATION OF RELUGOLIX

Meruva Sathish Kumar[1] , Mrs.S.Marakatham[2] , S.Siva prasad[3] ,V.Ravi[4] ,P.Phani Deepika[5] , M.Prathibha Bharathi[6]

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Zobrax stationary conditions are used in chromatography (160mm x5.5 mm, 5m). , portable stage ACN:Ammonium was used in a 55:45 ratio, with a detection wavelength of 310 nm, a column temperature of 30OC, and mobile phase as the diluent. A 2.79-minute retention time was discovered. Between 25% and 150% levels, a linearity research was conducted, and an R2 value was discovered.0.999 is to be. The results showed that the method precision was 0.5 and the intermediate precision was 0.2. The corresponding LOD and LOQ values are 0.4 g/ml and 1.2 g/ml. Keywords: RP-HPLC, Relugolix, Method development ICH Guidelines.