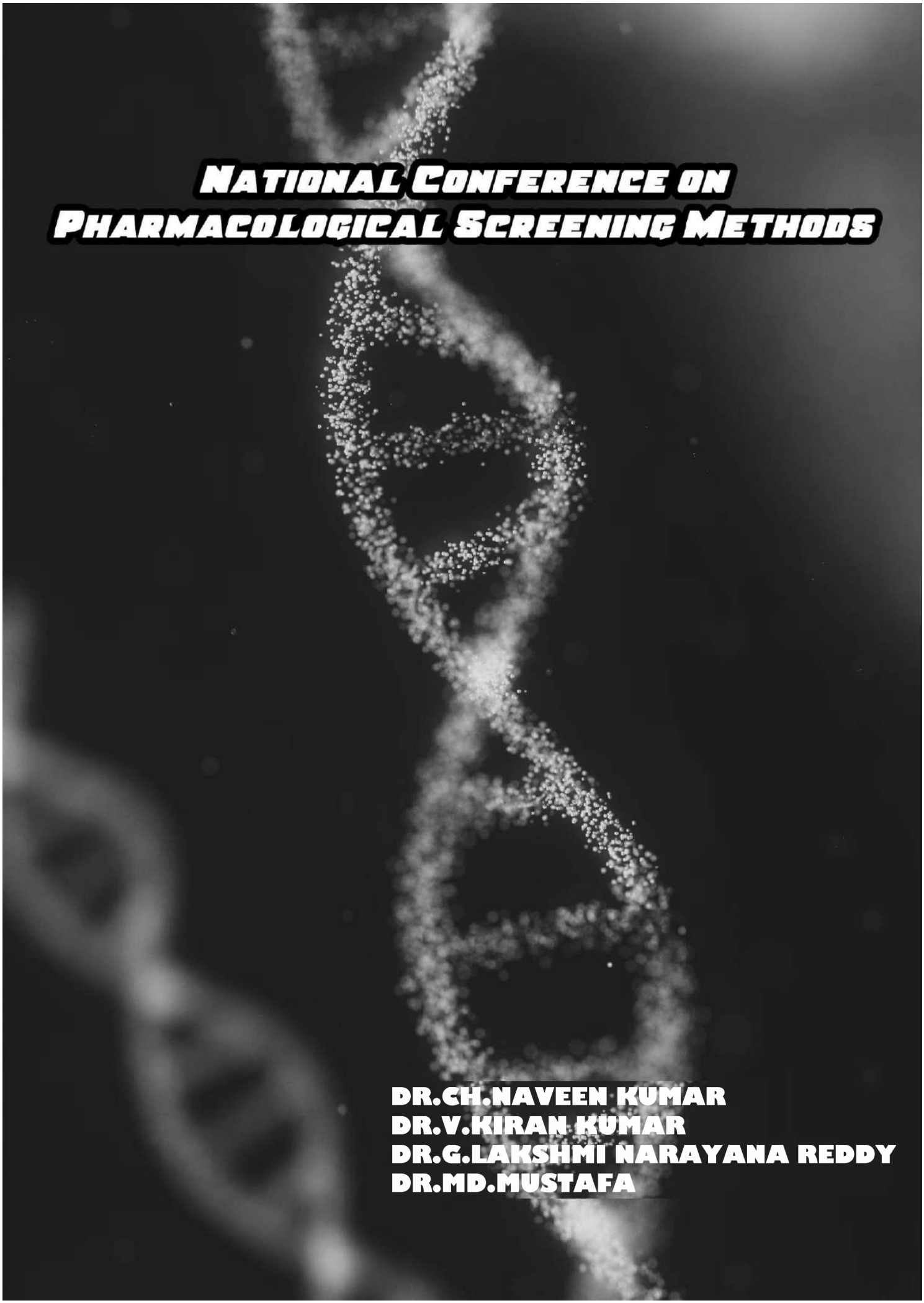
National Conference on
Pharmacological Screening Methods
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DR.V.KIRAN KUMAR
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National Conference on Pharmacological Screening Methods

Editors

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DOCTOR OF PHARMACY EDUCATION IN INDIA NEEDS INNOVATION: STRATEGIES FOR HIGHER DESTINY

Dr. CH.NAVEEN KUMAR, *Assistant Professor MOTHER TERESA COLLEGE OF PHARMACY*

Abstract:

A Doctor of Pharmacy (PharmD; Neo-Latin Pharmaciae Doctor) is an expert doctorate degree in pharmacy. In certain countries, it is a first professional degree and necessary for licensing to exercise the pharmacy career or to transform into a clinical drug specialist. The Clinical pharmacy has emerged as one of the newest branches of pharmacy in 21st Century. The clinical Pharmacists role in patient care is expanding, and the profession must prepare its graduates for direct patient care. In India there is accelerated work load on doctors who are unable to appear over usual healthcare services, hence here is an opportunity for PharmDs to explore their clinical knowledge which may improve the overall health care of society. Therefore, PharmD student should be trained to fabricate, disseminate, and apply new knowledge to determine cutting-edge research within the pharmaceutical, social, and clinical sciences; collaborate with other health professionals and to strengthen the quality of life through improved health for the people of our society and also because the global community. This article focuses on the possibility of innovative or imaginative ecosystems and trademark organization, as the rapidly developing pharmaceutical sector endeavors to turn into a global centre of unique medication examination and assembling, PharmD graduates with the proper training and knowledge have significant potential to power the clinical pharmacy growth in India.

THE RP-HPLC METHOD FOR QUANTIFYING VINPOCETINE IN PURE AND PHARMACEUTICAL DOSAGE FORMS WAS DEVELOPED AND VALIDATED.

G. SRAVANTHI, Assistant Professor MOTHER TERESA COLLEGE OF PHARMACY

Abstract:

A simple, precise, specific, and accurate reversed phase high performance liquid chromatographic (RP-HPLC) method was developed and validated for determination of vinpocetine in pure and pharmaceutical dosage forms. The different analytical performance parameters such as linearity, accuracy, specificity, precision, and sensitivity (limit of detection and limit of quantitation) were determined according to International Conference on Harmonization ICH Q2 (R1) guidelines. RP-HPLC was conducted on Zorbax C_{18} (150 mm length × 4.6 mm ID, 5 μm) column. The mobile phase was consisting of buffer (containing 1.54% w/v ammonium acetate solution) and acetonitrile in the ratio (40 : 60, v/v), and the flow rate was maintained at 1.0 $mLmin^{-1}$. Vinpocetine was monitored using Agilent 1200 series equipped with photo diode array detector (λ = 280 nm). Linearity was observed in concentration range of 160–240 μgmL^{-1}, and correlation coefficient was found excellent (R^2 = 0.999). All the system suitability parameters were found within the range. The proposed method is rapid, cost-effective and can be used as a quality-control tool for routine quantitative analysis of vinpocetine in pure and pharmaceutical dosage forms.

OPHTHALMIC FLUCONAZOLE DELIVERY FROM ION-ACTIVATED IN SITU GELLING SYSTEM FORMULATION AND EVALUATION

N NAVEEN KUMAR, Assistant Professor MOTHER TERESA COLLEGE OF PHARMACY

Abstract:

Fungal keratitis is a sight threating ocular infection that most frequently occur as a infection of candida species. The present work describes the formulation and evaluation of an ophthalmic delivery system of an antifungal agent, fluconazole, based on the concept of ion-activated in situ gelation. ocular in situ gels can increase the drug residence time thus increasing the bioavailability. Gelrite was used as the gelling agent in combination with HPMC E-50(Hydroxy Propyl methyl Cellulose) that acted as a viscosity-enhancing agent. Formulations were evaluated for physical parameter like clarity, pH, drug content, rheological studies, sterility test, in vitro drug release studies. the formulations were therapeutically efficacious, stable and provide sustained release of drug over a period of 8 Hrs. These results demonstrate that developed system is a best alternative to conventional ophthalmic drops.

EVALUATING INDIVIDUAL SLEEP DISTURBANCES IN TYPE-2 DIABETES MELLITUS: AN INTERVENTIONAL STUDY

M.SHIVA RAJ, Assistant Professor MOTHER TERESA COLLEGE OF PHARMACY

Abstract:

Background: Diabetes mellitus is a widespread disease, associated with rapid social and cultural changes, such as aging of population, urbanization, dietary changes, reduced physical activity, and unhealthy behaviours, leading to lower quality of life and decreased survival of affected individuals. This study aims to evaluate the sleep quality in patients with type 2 diabetes mellitus (T2DM), and to assess the relevance of other factors to sleep quality.

Methods: A cross-sectional study was carried out at the Government general hospital, Ananthapuramu, during the period from December 2020 to May, 2021. A total of 384 patients with T2DM were recruited. Data were collected using the Pittsburgh sleep quality index (PSQI) and ESS to assess the sleep quality with a cutoff point of PSQI $\geq$ 8. Participants' demographic background data were also recorded. Statistical analysis was conducted by using graph pad prism.

Results & Discussion: Using Scale scores with cutoff point global PSQI $\geq$ 8 for sleep evaluationin our study, we found that 77.6% of T2DM patients suffer from poorsleep quality.Our study found that poor sleep quality was higher in employed diabeticpatients, as compared to unemployed patients.This study showed that diabetic patients on insulin treatment were 2.17times more likely to complain of poor sleep quality compared to patients receiving OHA only.

Conclusions: Effectiveness of patient counselling by clinical pharmacist which improves the sleep quality. Thus patients reporting with sleep difficulties should be screened for diabetes. Type 2 diabetes patients with poor glycaemic control should be assessed for sleep disorders and if present it should be corrected to achieve optimum control of blood sugar levels.

HYPERTENSIVE PATIENTS IN RURAL DISTRICTS IN SOUTH INDIA: MEDICATION ADHERENCE.

Dr. V. KIRAN KUMAR, Professor MOTHER TERESA COLLEGE OF PHARMACY

Abstract:

Aim and Objectives: To study and assess the impact of medication adherence in patients suffering from hypertension.

Methodology: A prospective observational cohort study was conducted for a period of 6 months in a rural area of Guntur. A total of 300 hypertensive patients who were newly diagnosed or suffering from hypertension since 3 years were recruited. Blood pressure was measured by using a sphygmomanometer and other demographics were collected. Medication adherence was assessed using the HILL-BONE compliance to high blood pressure therapy scale (HILL-BONE CHBPTS).

Results: Hill-Bone scores were analyzed in the aspects of medication compliance, salt usage, and appointment keeping and observed a modest improvement in all aspects with an average of 8.49.

Conclusion: Proper treatment and awareness about medication and their usage will improve medication adherence. Good medication adherence not only improves the clinical outcomes, it is also having a great impact on improving the quality of life and reducing health care costs which are due to complications and co-morbidities of hypertension. Clinical pharmacists play a vital role in improving the adherence by providing periodic counselling, which in turn helps to reduce the burden of illness.

ION-ACTIVATED IN SITU GELLING SYSTEM FLUCONAZOLE OPHTHALMOTHERAPY FORMULATION AND EVALUATION

S. SARANYA , Assistant Professor MOTHER TERESA COLLEGE OF PHARMACY

Abstract:

Fungal keratitis is a sight threating ocular infection that most frequently occur as a infection of candida species. The present work describes the formulation and evaluation of an ophthalmic delivery system of an antifungal agent, fluconazole, based on the concept of ion-activated in situ gelation. ocular in situ gels can increase the drug residence time thus increasing the bioavailability. Gelrite was used as the gelling agent in combination with HPMC E-50(Hydroxy Propyl methyl Cellulose) that acted as a viscosity-enhancing agent. Formulations were valuated for physical parameter like clarity, pH, drug content, rheological studies, sterility test, in vitro drug release studies. the formulations were therapeutically efficacious, stable and provide sustained release of drug over a period of 8 Hrs. These results demonstrate that developed system is a best alternative to conventional ophthalmic drops.

DEVELOPMENT AND VALIDATION OF RP-HPLC TECHNOLOGY FOR RIVAROXABAN QUANTIFICATION IN PHARMACEUTICAL DOSAGE FORMS

D.SATISH, Assistant Professor MOTHER TERESA COLLEGE OF PHARMACY

Abstract:

Rivaroxaban, an anti-clotting medication, acts at a crucial point in the blood-clotting process and stops the formation of blood clots. In this study, RP-HPLC method was developed for the determination of rivaroxaban in tablets (Xarelto® (10 mg)). Phenomenex Luna 5 µm C18 100 Å LC Column (250 x 4.6 mm) was used at 40 ºC. Isocratic elution was performed with ACN:Water (55:45 v/v) mixture. The flow rate was 1.2 mL min-1 and UV detection was at 249 nm. Internal standard (Caffeine) and rivaroxaban were eluted within 2.21 and 3.37 minutes, respectively. The developed method was validated according to the ICH guidelines and found to be linear within the range 0.005 - 40.0 µg mL-1. The method was accurate, precise, robust and rapid. Thus, it was applied successfully for the quality control assay of rivaroxaban in tablet dosage form.

A CASE REPORT ON GYNECOMASTIA INDUCED BY SPIRONOLACTONE

D. BHARGAVI, Assistant Professor MOTHER TERESA COLLEGE OF PHARMACY

Abstract:

Gynaecomastia is generally caused by increased ratio of free circulating oestrogens/androgens or altered effects of these hormones on their correspondent intracellular receptors in the mammary tissue. The pathologies influencing the levels of circulating sexual hormones (i.e. testicular or adrenal neoplasias, hepatic cirrhosis, hyperthyroidism hypogonadism obesity, refeeding syndrome. The active principles known for most frequently causing gynecomastia are exogenous oestrogens, antiandrogens, 5 alpha reductase inhibitors, spironolactone and cimetidine. Medical history plays a fundamental role in the diagnosis of drug induced gynecomastia. A large variety of drugs have been implicated in its pathogenesis and they may induce gynecomastia by decreasing testosterone production ,increasing peripheral conversion of testosterone to estradiol and displacing estradiol from sex hormone binding globulin. We present a case report of 41 old male patient affected by spironolactone induced gynecomastia and discuss its pathogenetic mechanism.

A PRAGMATIC APPROACH TO THE DEVELOPMENT OF ANALYTICAL METHODS FOR REVERSE PHASE HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (RP-HPLC)

K. VIKRANTH, Assistant Professor MOTHER TERESA COLLEGE OF PHARMACY

Abstract:

High performance liquid chromatography is one of the most widely used tools to identify and quantify potency in drug substances and drug products. Analytical method development and validation are two very critical processes performed before release of a method for use in Quality Control department. This article focuses on stepwise practical approach towards developing a RP HPLC assay method. The various contributing parameters and its effect on the performance of the RP HPLC analytical method being developed are described simply, such that a new chromatographer is able to develop a method with the understanding of the RP HPLC method development process and its parameters.

SIMULAR EQUATION METHOD FOR TABLET AZITHROMYCIN AND CEFIXIME TRIHYDRATE DETERMINATION

Dr. G. LAKSHMI NARAYANA REDDY , Assistant Professor MOTHER TERESA COLLEGE OF PHARMACY

Abstract:

A simple, accurate, and precise uv-spectrophotometric method has been developed for the simultaneous estimation of azithromycin (AZI) and cefixime trihydrate (CEFI) in tablet formulation. The method was based on employing simultaneous equation method for the analysis of both drugs. AZI and CEFI have shown absorbance maxima at 222 and 289 nm in methanol, respectively. The linearity was obeyed in the concentration range of 10-50µg/ml for both drugs, with a significantly high correlation coefficient (r2 = 0.999). The limits of detection for AZI and CEFI were 0.81 and 1.52 µg/ml, respectively, and the limits of quantitation for AZI and CEFI were 2.40 and 4.60 µg/ml, respectively. The suitability of the developed method for quantitative determination of drugs was proved by validation. The method was successfully used to analyze a tablet formulation.

" A CRITICAL ANALYSIS: THE ROLE OF POLYHYDROQUINOLINE AS BIOACTIVE MOLECULES "

Dr. MD. MUSTAFA , Assistant Professor MOTHER TERESA COLLEGE OF PHARMACY

ABSTRACT: 1,4-Dihydropyridine (1,4-DHP) and polyhydroquinoline have a six membered aromatic rings. Pyridine ring system represents the major class of nitrogen heterocycles and its analogues exhibited diverse biological and physiological activities. Polyhydroquinolines, which are structurally related to DHPS, are another important group of nitrogen containing heterocycles that have attracted much attention because of their diverse therapeutic and pharmacological properties, such as their ability to modulate calcium channels. Polyhydroquinolines have been synthesized under mild conditions augmented by conventional heating, microwave irradiation, and uitrasound. Different polyhydroquinoline derivative synthesis were studied by using the reaction of dimedone, ethyl acetoacetate, substituted salicylaldehyde and ammonium acetate in ethanol in the presence of differ catalyst. All the synthesized derivatives evaluated were biologically active they showed anticancer activity, antibacterial activity, antifungal activity, antimalarial activity, antituberculosis activity, antihypertensive activity, anticoagulant activity. Multicomponent reactions to produce a particular product were performed by the one-pot MCR’s methodology that offers significant advantages over usual bimolecular reactions.

MOLECULAR IMPRINTING

M. SANTOSH, Assistant Professor MOTHER TERESA COLLEGE OF PHARMACY

ABSTRACT: Molecularly imprinted polymers have been used in a variety of analytical procedures in analytical separation science, including liquid chromatography, capillary electro- chromatography and capillary electrophoresis, immunoassay, and elective sorbent in chemical sensors. The ability to create sorbents with selectivity pre-determined for a specific substance or group of structural analogues of environmental and biological materials is a benefit of imprinted polymers. Imprinted polymers' increased selectivity over traditional sorbents may result in clearer chromatographic traces in subsequent analytical procedures. In addition, problems like peak broadening and tailing that are often related to imprinted polymers in chromatography are not present in the solid phase extraction application. As chiral stationary phases for enantiomer separations, imprinted polymers have been the subject of the majority of liquid chromatographic experiments. In capillary electro-chromatography, the use of imprinted polymers as selective sorbents has also been demonstrated. A method for producing artificial recognition sites on polymer matrices that complement the template in terms of size, shape, and spatial arrangement of functional groups is known as molecular imprinting. Molecularly imprinted polymers (MIP) have a high selectivity and affinity for the target molecules employed in the moulding process, which makes them an ideal polymer for use with molecular imprinting techniques.

STEREOCHEMISTRY

ZEENATH RUHY, Assistant Professor MOTHER TERESA COLLEGE OF PHARMACY

ABSTRACT: The study of the static and dynamic features of the molecules' three-dimensional forms is known as stereochemistry. It has long offered a base for comprehending both structure and reactivity. At the same time, stereochemistry is a legitimately fascinating area of study in and of itself. Simply said, the visual beauty of chemical structures and the exciting way that this area of study combines chemistry, geometry, and topology to investigate three-dimensional shapes intrigue many scientists. Additionally, stereochemistry has a number of extremely significant practical implications. Because the components of life—amino acids, nucleotides, and sugars— are chiral and manifest in nature in enantiomerically pure forms, nature is intrinsically chiral. Therefore, any materials developed by humans to engage with or alter nature interact with a chiral environment. For bioorganic chemists, this is a crucial topic, and for pharmaceutical chemists, it is a practical one. To ensure that both enantiomers of a medicine are safe, the Food and Drug Administration (FDA) now mandates that it be produced in enantiomerically pure forms or subjected to stringent testing. This study, thus focuses on the various aspects of stereochemistry that can improve and modify the chemical activities and reactivity.

INVESTIGATION OF NOVEL SYNTHESIZED PYRAZOLE DERIVATIVES

GALVA BHARGAVI, Assistant Professor MOTHER TERESA COLLEGE OF PHARMACY

ABSTRACT: Five-membered heterocyclic molecules known as pyrazoles have contributed significantly to the theory of heterocyclic chemistry. These substances are widely used as the primary structural component of a wide range of substances with biological properties like antifungal, anticancer, antiviral, antibacterial, anti-tubercular, and antiphrastic, in addition to important medicinal and agrochemical activities. An effort was made to create a simple and practical method of synthesising substituted pyrazolines by reacting aromatic aldehyde phenyl hydrazones with 4-methoxy cinnamonitrile while Chloramine-T was present. Using D-glucose as the starting point, this could prove to be a methodology for the synthesis of glucosyl pyrazole derivatives. The proposed microwave-mediated solvent-free techniques produced good reaction rates and yields, indicating that these steps can be regarded as simple, efficient, and environmentally sustainable synthetic approaches to produce pyrazole derivatives. Compared to the conventional process, this one avoids utilising very dangerous substances while yet offering an efficient way to make sugar-heterocyclic derivatives. The EATOS software, particularly in relation to the novel "one-pot" approach, validated this.

INVESTIGATION OF LATE-SYNTHESIZED QUINOLINE DERIVATIVE

B. SAMPATH KUMAR, Assistant Professor, MOTHER TERESA COLLEGE OF PHARMACY

ABSTRACT: Quinolines and their fused heterocyclic derivatives, which have been tested for a variety of pharmacological functional groups, are a crucial class of compounds for the development of new drugs. As a result, numerous experiments have synthesised these compounds as target structures and assessed their biological activities, which include anti-cancer, anti- bacterial, anticonvulsant, anti-malarial, anti-inflammatory, and cardiovascular activities. A class of synthetic, broadly acting antibacterial medications is known as quinolines. Although the majority of quinolones used in medicine are fluoroquinolones, derivative chemicals work against bacteria by inhibiting bacterial DNA from unwinding and replicating within bacterial cells. Numerous techniques have occasionally been developed for the synthesis of quinoline and its derivatives by microwave-assisted, ultrasound-promoted, or heterogeneous acid-catalyzed methods because they have a wide range of pharmacological activities and are also used as ligands in various biologically-modelled transition metal complexes. Other others, under UV light or solvent-free circumstances. Most of these techniques that have been described in the literature have been compiled by us here. The researcher working in this topic will find this review to be of great use. And it would assist them in creating a fresh, cost-effective, efficient way.

EXAMINING RECENTLY SYNTHESIZED DERIVATIVES OF PYRAZOLES.

K. MADHU, Associate Professor, MOTHER TERESA COLLEGE OF PHARMACY

ABSTRACT: A five membered ring system known as pyrazoles are the important members of heterocyclic compounds. Pyrazole analogues have been known to exhibit antimicrobial, analgesic, anticancer, anti-tubercular, anti- inflammatory, antidepressant, anticonvulsant, ant hyperglycemic, antipyretic, antihelmintic, antioxidant and herbicidal properties. Various methods have been performed for preparation and synthesis of substituted pyrazoles by the reaction of 1,3-diketones with hydrazine's 1,3-dipolar cycloaddition of diazole compounds with alkynes and the reaction of a ß-unsaturated aldehydes and ketones with hydrazine's. A facile and convenient route of synthesis for substituted pyrazolines based on the reactions of aromatic aldehyde phenyl hydrazones with 4-methoxy cinnamonitrile in the presence of Chloramine-T has been developed. Using D-glucose as the starting material a protocol for the synthesis of glucosyl pyrazole derivatives was made.The proposed microwave- mediated solvent-free techniques produced good reaction rates and yields, indicating that these steps can be regarded as simple, efficient and environmentally sustainable synthetic approaches to produce pyrazole derivatives. Compared to the conventional process, this one avoids utilizing very dangerous substances while yet offering an efficient way to make sugar- heterocyclic derivatives. This is confirmed by the EATOS software, especially with regards to the new "one-pot" method.

INSULIN AS A TOP DIABETES TREATMENT

B.LAXMI PRASANNA, Assistant Professor MOTHER TERESA COLLEGE OF PHARMACY

ABSTRACT

Diabetes Mellitus is a metabolic disorder characterized by hyperglycaemia, glycosuria, and hyperlipidemia. At present, India is considered as the diabetic capital of the world. There are approximately 3.5 crore diabetics in India, and this figure is expected to increase up to 5.2 crore by 2025. Two major types of diabetes mellitus are IDDM and NIDDM. Insulin is a hormone. And like many hormones, insulin is a protein. Insulin is secreted by groups of cells within the pancreas called islet cells. Discovery of Insulin is appropriately attributed to Banting and Best. It is made up of 51 amino acids having two chains. Chain A have 21 and Chain B have 30 amino acids. The more commonly used types of insulin are Rapid-acting (aspart or Lispro), Short-acting (regular insulin), Long-acting (ultralente insulin), Insulin glargine and insulin detemir. Insulin delivery systems that are currently available for the administration of insulin include syringes, insulin infusion pumps, jet injectors and pens. Insulin syringe is the most commonly used, and the most economical of all the delivery devices. Insulin pump is known as continuous subcutaneous insulin infusion therapy. A jet injector is a type of medical injecting syringe that uses a high-pressure narrow jet of the injection liquid instead of a hypodermic needle to penetrate the epidermis. Pen is reusable and prefilled device. Many insulin delivery devices are under process. The purpose of this review is to focus more light on the insulin as a prime drug for the treatment of diabetes from historical era to present time.

THE PRESENT STUDY FOCUSES ON THE SYNTHESIS OF NOVEL SUBSTITUTED ALDEHYDE DERIVATIVES.

A. UMANJALI, professor, MOTHER TERESA COLLEGE OF PHARMACY

Abstract: the aim of this research is to prove benzimidazole is a good bioactive molecule hence, it is worth to synthesis some new benzimidazole derivatives for better Anti-microbial activity by inhibiting the bacterial neucleic acid and proteins synthesis. This ability of benzimidazole is due to their structural similarities with the purine. In recent years, benzimidazole moiety have attracted much attention for their excellent biological properties, such as antimicrobial, anti-inflammatory,Antitubercular, anthelmintics, and Antitumor activities. Nitrogen containing heterocyclic important compound is a benzimidazole constitute an important class of biologically active e.g. antimicrobial, antiviral, and anti-inflammatory agent's.in this research chemicals used are O-phenylenediamine, benzaldehyde, ammonium chloride, ethyacetate, hexane, ethanol, silica gel-254. In Proposed scheme for reaction O-phenylenediamine is reacted with benzaldehyde to give 2 phenyl 1-H benzimidazole. Purity of 4-hydroxybenzaldehyde was cheked by TLC method when it was run under the solvent system of ethyacetate, hexane (1;2), Rf value was found to be 0.65.several other derivatives of substituted benzimidazole can be prepared and evaluated for their antimalarial activity. Same derivatives can also be evaluated for other activities like anti tubercular, anticonvulsant. Structutal based drug design in order to optimize the pharmacological profiles.

THE STUDY FOCUSES ON THE GREEN SYNTHESIS OF BENZIMIDAZOLE COMPOUNDS.

P. BHARATH, Assistant Professor MOTHER TERESA COLLEGE OF PHARMACY

Abstract: Green chemistry is the new and rapidly emerging field of chemistry. It involves The utilization of a set of principles that reduces or eliminates the use or generation of Hazardous substances in the design, manufacture and application of chemical products. In Recent decades, a large number of reports related to synthesis of Nitrogen, Oxygen and Sulphur containing heterocyclic have appeared owing to awide variety of their biological Activity. In recent years, numerous reports concerning the synthesis of heterocyclicCompounds under various conditions like solvent-free, reactants immobilized on solid Support, microwave irradiation condition, green catalyst and green solvent have appeared.benzimidazole is a heterocyclic aromatic organic compound. It is an iimportan Pharmacophore and privileged structure in medicinal chemistry. It plays a very important role With plenty of rational therapeutic activities such as antiulcer, antihypertensive, analgesic,Anti-inflammatory, anti-viral, antifungal, anticancer, and antihistaminic. Because of its Importance, the methods for their synthesis have become a focus of Synthetic OrganicChemists. Therefore in the present review I tried to compile the chemistry of differentDerivative of substituted benzimidazole and some of the important methodologies used for theSynthesis. Conventional methods of syntheticreactions need longer heating time, elaborateAnd tedious apparatus set up which result in higher cost and environmental pollution inContrast to greener methods which are ecofriendly and economical.

PHYTOCHEMICAL STUDIES OF CLOVE

A.VIVEKANANDA, *Assistant Professor MOTHER TERESA COLLEGE OF PHARMACY*

Abstract: The aim of present study was to investigate the phytochemical screening and to compare the antimicrobial activity of oils of Clove bud and Cardamom.

Clove bud was successively extracted by steam distillation and isolated with Dichloromethane. The phytochemical analysis revealed the presence of alkaloids, glycoside, steroids, carbohydrates, terpenoids, tannins and phenolic compound.

The dichloromethane extract was chromatographed over silica Gel (60-120) and eluted with pure toluene, toluene: Dichloromethane (9:1), toluene: Dichloromethane (8:2), toluene: Dichloromethane (7:3), fraction were monitored by T.L.C. similar fractions were combined and concentrated .eleven fractions were obtained and were labelled as f1, f2, f3 to f11. Cardamom fruit was successively extracted with petroleum ether. The phytochemical analysis revealed the presence of alkaloids, glycoside, steroids, protein, carbohydrates, terpenoids, tannins and phenolic compound. The Petroleum ether extract was chromatographed over silica Gel (60-120) and eluted with pure Benzene, Benzene: chloroform (9:1), Benzene: chloroform (8:2), Benzene: chloroform (7:3), Benzene: chloroform (6:4), Benzene: chloroform (5:5), Benzene: chloroform (4:6), and with pure chloroform. Fractions were monitored by T.L.C. similar fractions were combined and concentrated.

Fourteen fractions were obtained were labelled as fcd1, fcd2 to fcd14. Antimicrobial activity was performed by Disc diffusion method on the staphylococcus aureus (+ve), Escherichia coli (–ve), Pseudomonas

aerugenosa (-ve) bacteria and was found that cardamom and clove extract both were similar active for Pseudomonas aerugenosa (-ve) but cardamom was more active for E. coli than clove extracts.

PHAENYL 3-AMINO PHENYL 2-PYRAZOLINES: SYNTHESIS, PHARMACOLOGICAL EVALUATION, AND MOLECULAR DOCKING

S. SUSHMITHA, Assistant Professor MOTHER TERESA COLLEGE OF PHARMACY

ABSTRACT

The five-membered heteorocyclic group of pyrazoles/pyrazolines play s important role in drug discovery. pyrazoles/pyrazolines present a wide range of biological activities. The synthesis of the pyrazoles/pyrazolines derivatives was accomplished via the condensation of the appropriate substituted aldehydes and aceto phenones, suitable chalcones and hydrazine hydrate in absolute ethanol in the presence of drops of glacial aceticacid. The compounds are obtained in good yields 68.99% and that it structure was confirmed using IR, Hl-NMR, C13-NMR and elemental analysis. Molecular docking studies for pyrazoline derivatives were studied and reported.

Molecular docking studies reduce the time and costs involved in drug discovery process and have no adverse effect on the environment. Pyrazoles have been the recent target of numerous methodologies, mostly due to their prevalence as scaffolds in synthesis of bioactive compounds and reactions in different media. In this review, an attempt is made to provide an up to date developments in the synthetic strategies, biological activities associated with these classes of compounds. The chemical and biological applications shown by the pyrazolin analogues in recent years were discussed

STUDY OF ECLIPTA ALBA (LEAF) SOLANUM ZANTHOCARABUM'S PHYTOCHEMICAL AND ANTIMICROBIAL ACTIVITY (SEED METHANOL EXTRACT COMBINATION).

K. SURENDAR REDDY, Assistant Professor MOTHER TERESA COLLEGE OF PHARMACY

ABSTRACT:

Objective: This study aims to phytochemical and antimicrobial study of Eclipta Alba.
Materials and Methods:
Antimicrobial activity of flavonoids (free and bound) of Eclipta Alba L. was determined by disc diffusion assay against four bacteria (*Escherichia coli*, *Pseudomonas aeruginosa*, *Proteus mirabilis*, and *Staphylococcus aureus*) and four fungi (*Aspergillus flavus*, *Aspergillus niger*, *Trichophyton mentagrophytes*, and *Candida albicans*). Minimum inhibitory concentration (MIC) of the extract was evaluated through micro broth dilution method, while minimum bactericidal/fungicidal concentration was determined by subculturing the relevant samples. Total activity (TA) of extracts against each sensitive pathogen was also evaluated.

Results: Out of fungi; *A. flavus*, *A. niger*, and *T. mentagrophytes* were found to be resistant, against which none of the tested extracts showed activity. Bound flavonoids extract of root showed best activity against C. albicans (inhibition zone (IZ) 27.66, MIC 0.039, minimum fungicidal concentration (MFC) 0.039). TA of free flavonoid extract of root was found to be the same for *P. mirabilis* and *S. aureus* (192.30 ml/g). Two flavonoids quercetin and kaempferol were identified in the bound flavonoids of stem extract which showed activity against all the microorganisms.
Conclusion: Results of the present investigation indicate that *Eclipta Alba* has good antimicrobial activity with low range of MIC, hence can be exploited for future plant-based antimicrobial drugs.

POLYHERBAL OIL DEVELOPMENT, STANDARDIZATION, AND CLINICAL SIGNIFICANCE OF HAIR GROWTH STIMULATION

K.NAVEEN, Assistant Professor MOTHER TERESA COLLEGE OF PHARMACY

ABSTRACT

Background: Oil formulation is a one of the topical formulations and it gives better absorption on the skin and less adverse effect comparable to other formulation. When the plant formulated a soil it gives better absorption through skin and gives maximum therapeutic. There view of Murray akoenigii, Phyllanthus emblica, Azadira chtaindica, and Mentha spicata plants shows good medicinal value. All the plants provide hair growth activity. Among topical formulation, the oil formulation is more suitable for topical application and produce cooling effects.

Aim & objectives: To develop and standardization of Poly Herbal Oil and clinical evaluation of its hair growth stimulation.

Materials and methods: The Phytochemical investigation of a plant involves authentication and extraction of plant material; qualitative and quantitative evaluations; separation and parallel to this may be the assessment of pharmacological activity.

Results and discussion: Preliminary phytochemical screening was carried out for all the plants and its extracts to determine the presence of active principle in plants. Fluorescence analysis was carried out to detect the presence of chromophore present in the powder and extracts. Qualitative estimation of total flavonoid contend and total Phenolic content were determined by spectro photometrically all the extract showed significant amount of flavonoid and phenolic compounds.

Conclusion: It is concluded that the prepared poly herbal oil containing *Murrayakoenigi.i, Phyllathusemblica, Azadirachtaindica* and *Menthaspicata* proved hair growth activity.

ANTIMICROBIAL SCREENING AND SYNTHESIS CHARACTERIZATION OF 1,3,4-THIADAZOLE PHENOL DERIVATIVES

Dr. SATISH PUTTACHARI, Professor MOTHER TERESA COLLEGE OF PHARMACY

ABSTRACT

Objectives: Pathogenic microbes are causal agents for various types of severe and even lethal infectious diseases. Despite of development in medication, bacterial and fungal infections still persist to be a vital problem in health care. Bacteria and several fungal species have shown resistance to antibiotics used in treatment to current medications. Therefore, it is a considerable field of interest in the design and development of novel compounds with antimicrobial activity.

Methods: The compounds bearing a heterocyclic ring play an imperative role among other organic compounds with pharmacological activity used as drugs in human for control and cure of various infections. Thiadiazoles containing nitrogen–sulfur atom as part of their cyclic structure which shown wide-ranging application as structural units of biologically active molecules and are very useful intermediates in Medicinal Chemistry.

Results: The effectiveness of the thiadiazole nucleus was established by the drugs currently used for the treatment of various infections. 1,3,4-Thiadiazoles and some of their derivatives are widely studied because of their broad spectrum of pharmacological activities.

Conclusion: In the present work, a series of 1,3,4-Thiadiazole derivatives were synthesized by cyclization of a group of various benzaldehyde with thiosemicarbazide in the presence of various reagent like $FeCl^3$, HCHO by losing a molecule of water. These derivatives were found to possess prominent antimicrobial activity.

BENZIMIDAZOLE DEVIATES: DESIGN, SYNTHESIS, AND IN VITRO ANTI MICROBIAL ACTIVITY.

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ABSTRACT:

Benzimidazoles possess one of the most, useful biological activities. Benzimidazoles are utilizedin many therapeutic applications such as anti inflammatory, anti anxiety and anti microbial compounds.

We have developed a simple methodology for the preparation of substituted Benzimidazoles derivatives (HW1 –HW7). The direct condensation of 0-phenlenediamine (1 mmole) and appropriates aliphatic aromatic carboxylic acid (1 mmol) gave the required 2-substituted 1H Benzimidazoles (HW1 – HW7) in 60 to 85

% yields. All the synthesized compounds were characterized by using spectral techniques such as IR ^{H}NMR ^{13C}NMR and MS. The advantages of this method are extremely mild technique and compliance with green chemistry protocols.

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