

3.3.2 Number of Book chapters in edited volumes/Books published and papers published in National/International Conference proceedings during academic Year 2021-22

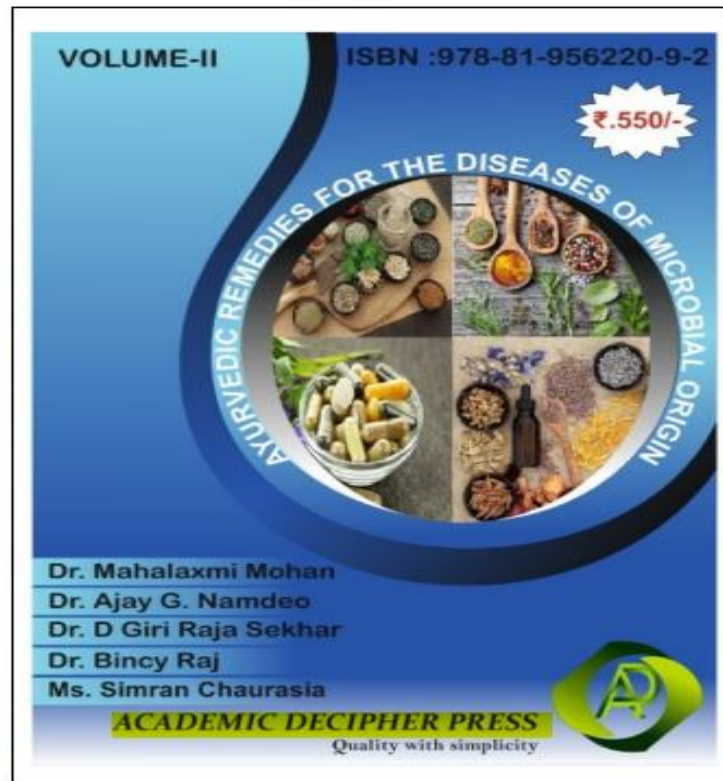
The faculty of the institution has contributed to the book/book chapters and conference proceedings for the academic year 2021-22 as mentioned below:

Total number of book/bookchapters	-	06
Total International Conference proceedings	-	47
Total	-	53



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3.3.2 Number of Book chapters in edited volumes/Books published and papers published in National/International Conference proceedings during academic Year 2021-22



22 **AYURVEDIC REMEDIES OF PULMONARY FIBROSIS**
 Dr. CH K V L S N Anjana Male*, Dr. Sk. Abdul Rahman, Mrs. Kurn Sucharitha, Mrs. Desaboina Chandana, Mrs. Guntaka Kavyasri.
 Nirmala College of Pharmacy, Atmakur, Mangalagiri, District Krishna, A Pradesh, India.
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ABSTRACT: [1,2] **INTRODUCTION:** [2,3]

AYURVEDIC REMEDI

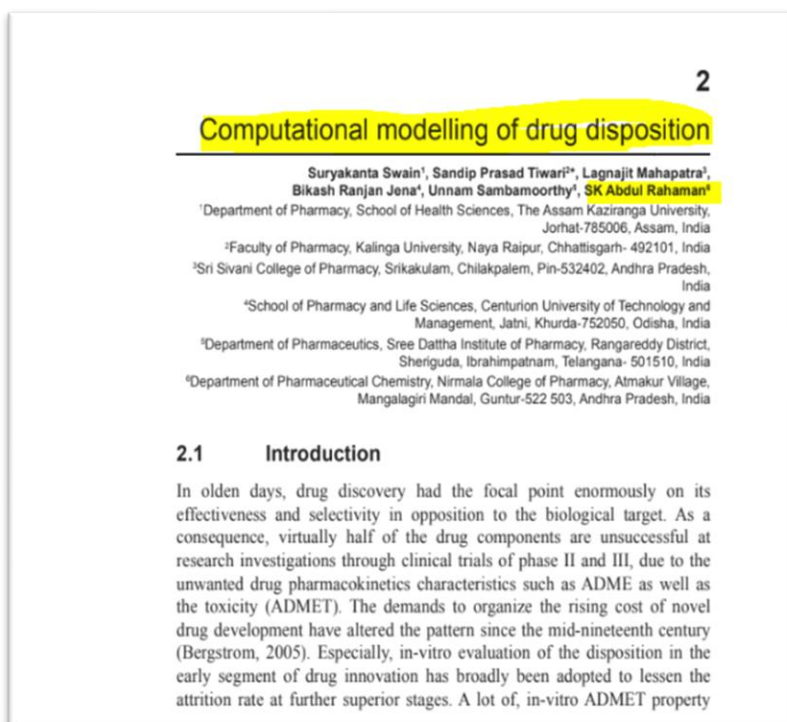
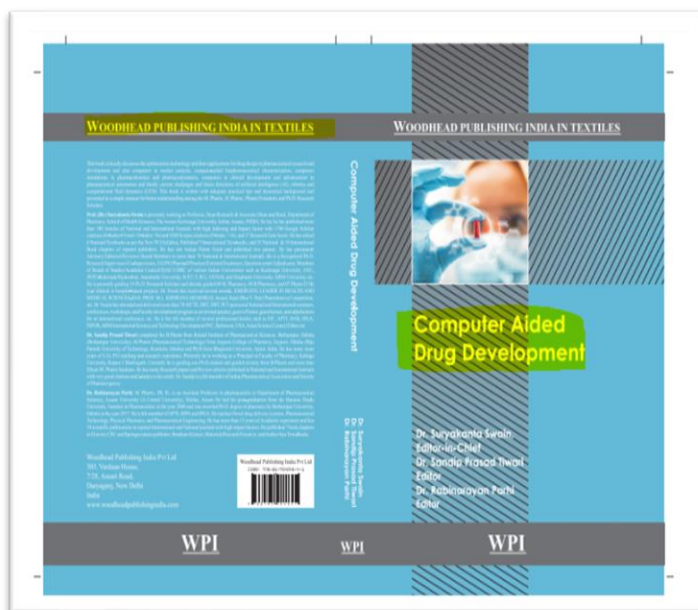
Lung fibrosis is also known as pulmonary fibrosis /idiopathic pulmonary fibrosis. This is a chronic fibrosing of lung disease limited to the lungs, associated with the histological appearance of usual interstitial pneumonia on surgical lung biopsy. Idiopathic pulmonary fibrosis mainly affects the aged

Pulmonary fibrosis is a lung dis that occurs due to damaged con of lung tissue that leads to thickened and improper functioning which can deareas breathing capacity. Ider etiological factors are Radi Asbestos fibers, Silica Aspiration pneumonia and d usage of some Antibiotics.



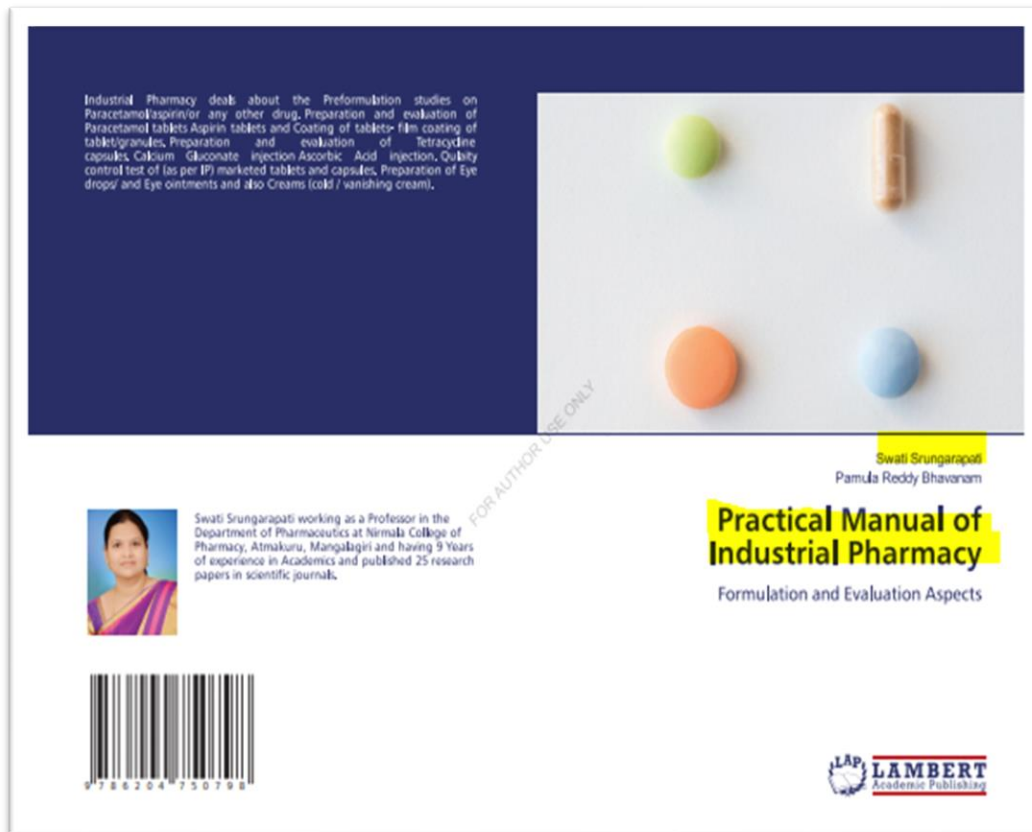
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Wound Healing Research pp 487–507 | [Cite as](#)

Potential Biomedical Applications of Marine Sponge-Derived Chitosan: Current Breakthroughs in Drug Delivery for Wound Care

[Harekrishna Roy](#), [Asha Gummadi](#) & [Sisir Nandi](#)

Chapter | [First Online: 21 July 2021](#)

643 Accesses | 1 [Altmetric](#)

Abstract


In recent years, there has been enormous search and demand for naturally sourced polymers



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Home / Books / Challenges and Advances in Pharmaceutical Research Vol. 2 / Chapters






Challenges and Advances in Pharmaceutical Research
Vol. 2

Cardioprotective Mechanism of Chemical Constituents of Medicinal Plant: A Brief Review

Sreya Kosanam; Rajeshwari Pasupula


Challenges and Advances in Pharmaceutical Research Vol. 2, 21 April 2022, Page 86-94
<https://doi.org/10.9734/bpi/capr/v2/2027B>
Published: 2022-04-21

View Article  Cite  Share 

Abstract


Plants are major source of human living. Since the beginning of the era plants have been used for medicinal purposes. There is an urgent need to investigate the mechanisms of chemical constituents in plants, particularly saponins and cardiac glycosides, because of their ability to save damaged cells in cardiac muscle. Articles describing the cardioprotective mechanism of medicinal plants were found by searching databases such as Google Scholar, Medline, PubMed, and the Directory of Open Access Journals. Saponin, flavonoids, glycoside, steroid, alkaloids, tannin, phenol, phlobatanin, terpenoids, and anthraquinone are chemical constituents in plants that improve cardioprotective activity and reduce cardiac abnormalities. The current review article provides information on the use of medicinal plants, specifically against cardiac diseases, as well as a study of molecules/phytoconstituents as plant secondary metabolites for their cardioprotective potential. The main objective of this review chemical constituents in herbal or traditional plants can be lifesaving in chronic heart diseases.




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The present state-of-heart is replicated through the data based on the edition of European (The European Pharmacopoeia and Council of Europe, 2002)(1) and US (United States Pharmacopoeia, 2004)(2) pharm accopoeias. From the stages of drug development to marketing and post marketing, analytical technique play a great role. be it understanding the physical and chemical stability of the drug, impact on the selection and design of the dosage form, assessing the stability of the drug molecules, quantitation of the impurities and identification of those impurities which are above the established threshold essential to evaluate the toxicity profiles of these impurities to distinguish these from that of the API, when applicable and assessing the content of drug in the marketed products.





Godoy Swapna

Analytical methods for determination of Lopinovir and Ritinovir

A study report

Dr Goday Swapna, Professor, Department of Pharmaceutical Analysis, Nirma College of Pharmacy, Atmakur, Mangalagiri, Research Experience and Teaching Experience for 15 years. Contributed to more than 60 Publications in National and International Journals, Published and Filed Patents, presented and participated in scientific presentations.



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Journal of Cardiovascular Disease Research

ISSN: 0975-3583, 0976-2833 VOL 12, ISSUE 04, 2021

FORMULATION AND EVALUATION OF ERODIBLE PULSATILE DRUG DELIVERY SYSTEM OF THEOPHYLLINE FOR NOCTURNAL ASTHMA

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¹ Assistant professor, Nirmala College of Pharmacy, Mangalagiri, Andhrapradesh, India- 522503

² professor, KVSRR Siddhartha College of Pharmaceutical sciences , Vijayawada, Andhrapradesh, India- 520010

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ABSTRACT:

Theophylline, an asthmatic drug is based on the relaxation of bronchi. This drug has a great variability in clearance (elimination $t_{1/2}$ 2-6 h, adults 6-12 h) and a narrow therapeutic range (7.5-20 $\mu\text{g/ml}$). Once or twice daily administration of controlled release preparations in patients with chronic obstructive pulmonary disease (COPD) is recommended for better patient compliance. The commonest side effects are headache, nausea and vomiting, abdominal discomfort and restlessness. There may also be increased acid secretion, gastroesophageal reflux and diuresis. At high concentrations convulsions and cardiac arrhythmias may occur. Hence, in the present investigation, an attempt has been made to fabricate a Formulation and Evaluation of Erodible Pulsatile Drug Delivery System of Theophylline for Nocturnal Asthma. Aim of the present work was to formulate and evaluate an oral, pulsatile drug delivery system to achieve time release of Theophylline, based on chronopharmaceutical approach for the treatment



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Journal of Cardiovascular Disease Research

ISSN:0975-3583,0976-2833

VOL12,ISSUE05,2021

A Review on Spinal Muscular Atrophy: Its Cause, Diagnosis and Treatment

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¹ Assistant professor, Nirmala College of Pharmacy, Mangalagiri, Andhrapradesh, India- 522503

² Assistant professor, KVSr Siddhartha College of Pharmaceutical sciences, Vijayawada, Andhrapradesh, India- 520010

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Abstract:

The spinal muscular atrophy is considered as one of the familiar autosomal recessive disorder. Children suffering from spinal muscular atrophy suffer with diminished ability of normal growing processes like crawling, sitting, walking and controlling head movements. Even if SMA becomes severe, it may lead to damage of muscles helpful in breathing and swallowing which life is threatening. It was found that SMA occurs due to improper production of SMN (the survival motor neuron protein). The mutations on SMN1 and SMN2 gene are responsible for the improper production of SMN protein. The deletion of SMN1 gene is regarded as the primary level diagnostic test. Other conformation tests are electromyogram and Multiplex ligation-dependant probe amplification (MLPA) test. Treatment of SMA was done initially by using drugs like Quinazoline derivatives, aminoglycosides and neuroprotective drugs. However, these drugs increased the life span of SMA patients but could not offer relief from the disease. Hence, gene therapy came in to focus and found useful in the treatment of SMA. Currently used 3 forms of gene therapy are Nusinersen (Spinraza), Onasemnogene APOB-related protein-1 (Zolgensma) and Risdiplam (Evrysdi). Stem cell therapy is used which involves the transplantation of stem cells.



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Journal of Cardiovascular Disease Research

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A CASE REPORT ON IBUPROFEN INDUCED STEVEN JOHNSON SYNDROME

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Abstract

SJS is a acute life-threatening disasters consequence of hypersensitivity reaction precipitated by certain drugs like NSAID compounds, antiepileptic and antibiotics. Age, nutrition status presence of co-morbidities are important co-factor for prognosis. Immune dysfunction mediated by T-Lymphocytes and oxidative stress generated are major cause. Ibuprofen is a common over the counter antipyretic analgesic NSAID. Hypersensitivity syndrome associated with Ibuprofen is a host dependent idiosyncratic drug reaction. A 30 year old female came to emergency department of a teaching hospital in Mahaboobnagar with chief complaints of appearance of blisters on oral mucosa after taking Ibuprofen 400mg tablets since 15days for joint pains . She developed multiple macular initially over face, lower limbs. Upon examination she had extensive erythema, necrosis. The body temperature was 100.4°F, respiratory rate 24/min, Pulse rate 110 bpm. Upon laboratory examination her WBC levels also decreased along with rash, itching and serum uric acid was increased.

Keywords: SJS, hypersensitivity, NSAID and WBC

Introduction

Modern day drug therapy for control of pain has made great strides in the recent past. Nevertheless, adverse reactions although rare still remains a major threat to the patient well being. Generally fever with stomatitis and



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International e-Conference on Recent Trends in Pharmaceutical Research

PHT-EO/21

RECENT ENGINEERED COPPER NANOPARTICLES USED IN NEURODEGENERATIVE DISEASES

Dr.Hareroy^{*1}, G.Deepthi², V.Sunanda³, V.Athidhya⁴

Department of Pharmaceutics, Nirmala College of Pharmacy,
Atmakur, Mangalagiri Guntur district-522503

ABSTRACT

Introduction: Neurodegenerative diseases (NDD's) are devastating heterogeneous diseases, in which degeneration of axons, neurons in the central nervous system that causes oxidative stress and abnormalities in cellular functions in the brain results in Alzheimer's diseases, Parkinson's disease and Huntington's diseases, the three major neurodegenerative diseases and Amyotrophic lateral sclerosis, Prion diseases, Friedreich ataxia. Many drugs are available for treatment of these diseases, but the restrictive nature of Blood-Brain Barriers (BBB), the vital boundary between neural tissue and circulating blood creates an obstacle preventing entry of drug into the brain. By overcoming BBB and also due to physicochemical characteristics of nanoparticles, Nanoparticle mediated drug delivery plays a significant role in enhancing the amount and concentration of therapeutic compounds in brain in treating NDD's. Copper, an essential element for human body founded many applications in nanotechnology due to its low cost, high elimination capacity from the body.

Objective: This review aims to highlight the recent proposed copper nanoparticles used in neurodegenerative diseases. This review begins with a brief history of nanoparticles, their uses



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International e-Conference on Recent Trends in Pharmaceutical Research

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International e-Conference on Recent Trends in Pharmaceutical Research

PHT-EP/20

DEVELOPMENT OF AGOMELATIN LOADED NANOSUSPENSION UTILIZING STABILIZER AND SURFACTANT

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^{*1,2}Department of Pharmaceutics, Nirmala College of Pharmacy, Mangalagiri, Andhra Pradesh, India.

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ABSTRACT

The aim of the present work is to develop oral Nanosuspension of Agomelatin by solvent evaporation method using various Stabilizers & Surfactants such as PVP K30, Pluronic F127, Urea & SLS. Various formulation as well as process parameters were optimized in order to achieve desirable size and saturation solubility. Characterization of the prepared Nanosuspension was done with respect to particle size, zeta potential, saturation solubility, dissolution rate, morphology study (SEM), in-vitro dissolution study. Zeta potential value for the optimized formulation (F12) was found to -22mv which was found to be within the acceptable limits. Average particle size of nanosuspension of optimized formulations (F12) was found to be 118nm. From the invitro studies we can say that formulation F12 shows best drug release of 98.65% within 30 minutes where as all the other formulations didn't release the drug. The drug release from the Nanosuspension was explained by the using mathematical model equations such as zero order, first order, and equation methods. Based on



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Journal of Cardiovascular Disease Research

ISSN-0975-3583,0976-2833

VOL12,ISSUE05,2021

A REVIEW ON THERMOSTABLE VACCINES

Lurdhumary.K¹, K. Mounika, Salma Begum.MD², Srikala kamireddy¹, kusumitha.A³, S.Ramya, Lakshmi Prasanna.Y

Abstract: Vaccines are readily losing their efficacy when exposed to higher temperatures. But 3 vaccines are approved by World Health Organization for use at temperature up-to 40°C those are Meningitis, Human Papilo Virus and Cholera vaccines. Vaccine for SARS-COV-2 is under clinical trial which is also thermostable vaccine. The Indian institute of sciences and biotech firm developed MYNVAX Vaccine by using genetic engineering, it is a domain of the S-protein of the SARS -COV-2 viruses called the Receptor binding domain, which attaches itself to the ACE- 2 receptor on the surface of target cells in the human respiratory tract. This makes the virus to enter the body and cause the infection. The pseudo viral assays done at the CSIR –Institute of microbial technology in India and the results from the live virus tests by CSIRO –Australia were very encouraging shows that effective neutralization of alpha, beta, gamma and delta SAR –COV-2 variants. This review of literature is to summarize the clinical trials, mode of action, storage conditions and efficacy levels of Thermo stable vaccines.

Key words: WHO, Thermostable, SAR –COV-2,

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Introduction: Vaccines usually contains dead or inactivated organisms or purified products derived from them. There are several types of vaccines that are being used. These represent the different strategies used to reduce the risk of illness while retaining the ability to induce a beneficial immune response. A vaccine is a biological preparation that gives active acquired immunity to a particular infectious disease. A vaccine generally contains a biological preparation from disease causing micro organism. And since the start of the 21st century, it is prepared synthetically that resembles it. This preparation is usually made up of weakened or killed forms of the microbes, its toxins, or its proteins. Vaccine stimulates the body's immune system to recognize the agent as a threat and starts manufacturing antibodies against it so that it can



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Journal of Cardiovascular Disease Research

ISSN: 0975-3583, 0976-2833 VOL 12, ISSUE 06, 2021

A REVIW ON MATRIX-ASSISTED LASER DESORPTION/ IONIZATION TIME-OF-FLIGHT (MALDI-TOF) MASS SPECTROMETRY.

Masimukkuyogeswari¹, srikala kamireddy², **lurdhu mary.k²**, macharlavydehi¹, k.sucharithra³,
T.hemambareswari⁴

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Abstract:

Background: maldi-tof mass spectrometry (ms) is an important technique that produces both qualitative and quantitative measurements of low molecular weight compounds for its rapid, reliable results. It is a recent method for bacteria identification. It is set to make in rounds into clinical chemistry because it gives advantages over other analytic platforms. These benefits include low purchase and operating costs, ease of use, ruggedness, and high throughput. When coupled with innovative front-end strategies and applied to important clinical problems, it can produce rapid, sensitive, and cost-effective assays.

Content: the use of maldi-tof mass spectroscopy will certainly help in the rapid identification of anything unusual. Maldi-tof mass spectroscopy has become a reference method for the routine identification of bacteria isolated in clinical microbiology laboratories around the world. Its specificity, user-friendliness, together with its ability to provide reliable results in less than 5 min has favored its implementation and further development. The measure of microbial species identified by maldi-tof routinely has risen in the last few years.

Summary: maldi-tofms, already changed the practice of clinical microbiology and, the analysis illustrates how and why it is now set to play a more important role in vitro diagnostics in particular, and clinical chemistry.



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A REVIEW ON NANO TECHNOLOGY

Uppalapati Srujanika*, Sri R. Nareesh Babu V, Bhavani, V. Adithyana, M. Bhargavi, Sri Chaitanya

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ABSTRACT:

Nanotechnology has created one of the most dynamic science & technology domains at the confluence of physical sciences, molecular engineering, biology & medicine. It includes better understanding of living system, synthesis of new drugs and their targeted delivery, Neurospheric engineering & developing a sustainable environment. The reduction of drug particles into submicron range leads to a significant increase in the dissolution rate & therefore enhances bioavailability. Targeting delivery of drugs to the diseased lesion is one of the most important aspects of drug delivery system. Various polymers have been used in the formulation of nanoparticles of drug delivery research to increase therapeutic benefit while minimizing the side effects. This review article presents the most understanding contribution in the field of nanotechnology as drug delivery system.

INTRODUCTION :

- > Physician Richard Feynman, father of nanotechnology
- > Nanotechnology is science, engineering and technology conducted at the nanoscale, which is about 1-100nm.
- > The branch of technology that deals with dimensions and tolerances of ~100nm, especially the manipulation of individual atoms & molecules.
- > Nanoparticles are minuscule smaller particles with more efficacy.

ADVANTAGES	DISADVANTAGES
1) Promoting renewable energies: Enables new ways to obtain & store energy. It also makes solar panels cheaper & more efficient.	1) It threatens the environment: This type of technology could cause negative effects on the environment by generating new toxins & pollutants.
2) It extends the limits of electronics: Unlike silicon microchips, Nano-chips will make it possible to build very precise circuits at an atomic level.	2) It has an impact on the job market: the obsolete materials and changes in production processes could destroy jobs but this technology could create others.
3) It allows a more effective medicine: Damaged genes can be repaired faster and more precise surgeries can be performed.	4) It compromises the safety properties of this technology facilitates espionage, production of nano weapons & smart bullets.

TYPES:

- > Descending type: Top-down(bulk to low)
- > Ascending type: bottom up(self assembly)

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COMPREHENSIVE REVIEW AND STUDY ON ANTI EPILEPTIC DRUG LEVETIRACETAM

AUTHOR: R. NARESH BABU (Associate professor), MOLLETTI ABHIRSHEK Department of
pharmacology, Nirmala college of pharmacy, Atmakur, Mangalagiri, Guntur District
Andhra Pradesh.

ABSTRACT

Levetiracetam is an antiepileptic drug approved for use as an adjunctive agent in partial-onset seizures in adults. This approval was recently extended to children over 4 years of age. Among the currently approved antiepileptic drugs, levetiracetam is unique in its mechanism of action. Its CNS binding site, the synaptic vesicle protein SV2A, was discovered recently. Levetiracetam is a new anticonvulsant agent with a favourable tolerability profile and a low potential for drug interactions. It has shown efficacy as adjunctive therapy in patients with treatment-refractory partial-onset seizures with or without secondary generalization in clinical trials. In most studies of levetiracetam when given with other seizure medicines, 20 to 40% of people had at least a 50% decrease in their seizures. (This means that the number of seizures each month was at least cut in half.) Most people did not have many problems with side effects in these studies. Direct comparative trials with other anticonvulsant agents are not yet available, but placebo-controlled clinical evidence to date suggests that levetiracetam (1000, 2000 and 3000 mg/day) is a useful option as adjunctive therapy in patients with this subtype of epilepsy.

KEY WORDS: Anticonvulsant, Synaptic vesicle protein, Adjunctive therapy

COMPREHENSIVE REVIEW AND STUDY ON ANTI EPILEPTIC DRUG LEVETIRACETAM

SUBMITTED BY:

M.P.S. Abhishek

I. Soniya

G. Ravi Teja

D. Paveethika

M. Shwethika


FOUNDER:

R. NARESH BABU (Associate Professor)

CO-FOUNDER:

M. P. S. ABHIRSHEK




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Journal of Cardiovascular Disease Research
ISSN: 0975-3583, 0976-2833 VOL. 12, ISSUE 04, 2021

ENHANCEMENT OF SOLUBILITY AND DISSOLUTION RATE OF GLIPIZIDE BY LIQUISOLID TECHNIQUE

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*Corresponding author Email address: Sundarrajety@gmail.com

ABSTRACT:


Liqui-solid technique are novel approach for enhancement of dissolution rate of BCS class II drugs. Liqui-solid compact converts a liquid drug or drug solution into a free flowing powder with enhanced dissolution rate. In the present study, Liqui-solid compact is applied to enhance the dissolution of the Glipizide. Twenty two formulations of Glipizide were prepared by liqui-solid technique using micro crystalline cellulose as carrier material and Avicel and Croscopolamide as wetting material. Water, poly ethylene glycol-600 and Tween-80 were used as solvent system. Tablets were subjected to evaluation of various physical and chemical characteristics. Dissolution profiles of tablets prepared by the novel technique were compared with marketed conventional tablet. Model independent techniques including similarity factor, dissimilarity factor and dissolution efficiency were applied for comparison of dissolution profiles. The results obtained indicated that liqui-solid compact formulations were more effective in enhancing the dissolution rate. The liqui-solid compacts improved the dissolution rate.

KEYWORDS: Liquisolid compacts, Glipizide Dissolution, BCS Class 2, Dissolution rate

INTRODUCTION

Bioavailability is the most important property of a dosage form¹. It is the ability of the dosage form to deliver the active ingredient to its site of action in an amount sufficient to elicit the desired pharmacological response². It is well known that the drug bioavailability and efficacy is severely limited by its poor aqueous solubility and dissolution rate³. The drug in a solid dosage form must undergo dissolution before it is available for absorption in the gastrointestinal tract. Dissolution forms the rate limiting step in the absorption of drug from solid dosage forms especially when the drug is poorly soluble⁴. Many of the modern drugs belong to the Class II category under Biopharmaceutical Classification System (BCS), which are characterized by low solubility and high permeability. These drugs are insoluble in water and aqueous fluids in the pH range of 1.0 - 7.5 and exhibit low and variable dissolution and bioavailability. There is a great need to develop technologies for these "BCS" Class II drugs for enhancing their dissolution rate and bioavailability⁵. The enhancement of dissolution rate and oral bioavailability of poorly soluble drugs remains one of the most challenging aspects of drug product development. With the recent advent of high throughput screening of potential therapeutic agents, the number of poorly soluble drug candidates has risen sharply and the formulation of poorly soluble compounds for oral delivery now presents one of the most frequent and greatest challenges to formulation scientists in the pharmaceutical industry⁶. One of the major current challenges of the pharmaceutical industry is related to strategies that improve the aqueous solubility of drugs. Briefly, solubility is defined as the concentration of solute in a saturated solution at a defined temperature and pressure⁷. Solubility is closely related to dissolution which is a kinetic process that involves the detachment of the molecules from the solid surface and subsequent diffusion across the diffusion layer surrounding the solid surface.⁸




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FORMULATION, EVOLUTION AND OPTIMIZATION OF LERCANIDIPINE HYDROCHLORIDE ORAL FAST DISSOLVING FILMS
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ABSTRACT
Lercanidipine hydrochloride (LER) is a BCS class II anti hypertensive drug basing on its low solubility and high permeability characteristics, these drugs having its oral bio availability is dissolution rate limited which results in limited oral bio availability of 10%. The purpose of this study is to enhance dissolution and thus the bio availability of LER increases by preparing oral fast dissolving films of LER by solid dispersion technique. The present study involves incorporation of LER in a polymeric Matrix. Solid dispersions of LER were prepared by two-behavior design through solvent evaporation techniques by varying drug to polymer ratio. Solubility of LER was studied in different polymers like Soluplus, Kolliphor, PEG 6000, PVP K30, water, phosphate buffers pH 1.2, 4.5, 6.8. From this study, among all the solvents and carriers the drug shows high solubility in soluplus and low solubility was seen in water. Films obtained showed improved LER release compared to pure and physical mixture it can be confirmed from the obtained results that films can be a method if choice for increasing the solubility dissolution and in turn the bio availability of LER.
KEY WORDS: Lercanidipine, Soluplus, Solid Dispersion, Solvent Evaporation Method, HPMC.

INTRODUCTION:
Hypertension is a common disorder that occurs when a pressure in arteries persistently increased. It is of 2 types primary and secondary hypertension. Primary hypertension doesn't have any identifiable cause of high blood pressure. It occurs mostly in adults. Secondary hypertension is caused by underlying conditions. It also may occur during pregnancy time. Sphygmomanometer (manual, digital) is the instrument used to measure the hypertension. Blood pressure of 150/90 mm Hg or higher then you will mostly like to be diagnosed with high blood pressure. It can lead to severe health disease, stroke and sometimes death.
Classification system of active substances based on their aqueous solubility and membrane permeability is called as Biopharmaceutical classification system. Aqueous solubility and permeability plays an important role in oral bioavailability. Lercanidipine is the BCS class - II anti hypertensive drug. It belongs to dihydropyridine type of calcium channel blocker. It reduces the increased blood pressure by relaxing vasodilation. It acts by relaxing vascular smooth muscle to lower peripheral resistance. LER has only 10% of bioavailability due to first pass metabolism. So, it requires enhancement of dissolution rate and bioavailability to attain its maximum therapeutic efficiency.
Techniques to Enhance Solubility:
1. **Physical modification:** micronization, nano-crystallization, nano-emulsion, super critical fluid process, polyoxophanes, pseudo-polymorphism, eutectic mixtures, solid dispersions, emulsions, micro emulsions by using surfactants.
2. **Chemical modification:** change in pH, use of buffer, derivatization.
3. **Other methods:** co-crystallization, co-solvency, hydrogels, solubilizing agent, selective absorption on insoluble carrier, solvent deposition, using soluble prodrug, functional polymer technology.
The most widely used technique to improve the solubility is solid dispersion technique. Solid dispersion is dispersion of one or more active ingredients in an inert carrier at solid state prepared by solvent evaporation method. In solvent method, drug and polymers are dissolved in little amount of solvent and solvent is removed by evaporation under reduced pressure.
Oral Fast Dissolving Films [8-13]
Rapid or fast dissolving oral film is becoming an increasingly popular drug delivery system because the film dissolves within a few seconds on contact with saliva. As most of the polymers used in oral films are amorphous, they aid rapid dissolution without the need of water. As a result of these advantages, ODF are mostly suitable for paediatric and geriatric patients. [9]
Need for Oral Fast Dissolving Films: Oral fast dissolving films [OFDF] is one such novel approach to increase consumer



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Development and Validation of Simple Simultaneous Analysis for Indacaterol Maleate and Glycopyrronium Bromide by RP-HPLC

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ABSTRACT

Simple, Accurate, precise method was developed for the simultaneous estimation of the Indacaterol and Glycopyrrolate in Bulk and pharmaceutical dosage form. Chromatogram was run through Kromasil C18 150 x 4.6 mm, 5 μ . Mobile phase containing Buffer 0.1% OPA: Acetonitrile taken in the ratio 55:45 was pumped through column at a flow rate of 1.0ml/min. Buffer used in this method was 0.1% OPA buffer Retention time of Indacaterol and Glycopyrrolate were found to be 2.319min and 2.830 min. %RSD of the Indacaterol and Glycopyrrolate were and found to be 0.8 and 1.1 respectively. %Recovery was obtained as 99.68% and 100.08% for Indacaterol and Glycopyrrolate respectively. LOD, LOQ values obtained from regression equations of Indacaterol and Glycopyrrolate were 0.60, 0.23 and 1.82, 0.70 respectively. Regression equation of Indacaterol is $y = 21685x + 6734.3$, and $y = 21025x + 3152.8$ of Glycopyrrolate. 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.

Key Words: Indacaterol, Glycopyrrolate, RP-HPLC

I. INTRODUCTION




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DEVELOPMENT AND VALIDATION OF VISIBLE SPECTROSCOPY METHOD FOR THE DETERMINATION OF THIAMINE (VITAMIN B1) IN BULK AND PHARMACEUTICAL DOSAGE FORM

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ABSTRACT

A simple spectrophotometric method has been described for the determination of thiamine. The method is based on the derivatization of thiamine with MBTH (0.2%w/v) in alkaline medium 2 mL NaOH (1N) was performed. It was found that the product is Yellow colored exhibiting λ_{max} at 434nm. The λ_{max} of thiamine-MBTH derivative was red-shifted, eliminating any potential interference. The wavelength 434 nm therefore was fixed as optimum. Beer's law was obeyed over the concentration range from 1-50 $\mu\text{g/mL}$ thiamine. The relative standard deviation, < 1.5%; correlation coefficient, 0.9998; molar absorptivity 0.96×10^4 , Sandels sensitivity 35ng/cm²; The limit of detection, 0.0076 $\mu\text{g/mL}$; the limit of quantification, 0.0231 $\mu\text{g/mL}$ and recovery, 101.47% thiamine. Finally, the developed method was applied to the determination of thiamine in pharmaceutical formulations.



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A Review on Lemborexant Drug Used For Insomnia

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ABSTRACT:

Decreased sleep and wakefulness control cycles can lead to insomnia, which is characterized by difficulty in starting and/or maintaining sleep and is associated with daytime disability. Lemborexant, an antagonist of the orexin receptor, is used for insomnia approved by the US FDA. Lemborexant is safe for use in patients with obstructive sleep apnea (OSA). The neuropeptides binding block that stimulates orexin A and orexin B to the orexin receptors OX1R and OX2R are thought to suppress the wake drive. CYP3A inducers of Itraconazole, clarithromycin, Fluconazole, and verapamil in combination or with lemborexant may increase the adverse effects. Study1, Long-term effectiveness and safety of lemborexant in adults with insomnia disorder. Study 2, multicenter, randomized, blind-blind, placebo-controlled, active comparator, parallel-group Phase III learning lemborexant performance and safety in 1,006 patients aged 55 years and older 45% of all patients were 65 years of age and older insomnia began in North America and Europe. Study 3, Studying 108 was a randomized, double-blind, four-term crossover study that examined the effects of lemborexant on posture condition, hearing impairment, and brain function in 56 healthy volunteers aged 55 and over. study 4, was 1 month, randomized, blind-blind, placebo- and actively controlled, multicenter, placebo-controlled trial in adult patients aged 55 and over and male patients 65 years and older who met the DSM-5 procedure. Study 5, Sunrise 2 is a 12-page multi-page, global, randomized, placebo-controlled, blind, phase III study of 949 adult male and female participants in Japan, North America, South America, Europe, Asia, Asia, and Oceania.

KEYWORDS: Lemborexant, sleep, orexin, study, insomni

1. INTRODUCTION:



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FAVIPIRAVIR-ANALYTICAL METHODS

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Favipiravir-Analytical methods

High performance liquid chromatography (HPLC) and spectrofluorimetric methods have been developed for quality control of favipiravir in pharmaceutical formulations.

Abstract:

Favipiravir a pyrazine analogue its shows antiviral activity of viruses. The separation was carried out by C18 column. The mixture of potassium dihydrogen phosphate (mobile phase A) and acetonitrile (mobile phase B) for flowing phase. In HPLC column temperature was 30° and ultraviolet detection was 323nm. The column run time was 15min under chromatographic conditions. Excellent linear relationship between peak area and favipiravir concentrations has been observed. Developed HPLC method found to be sensitive, precise, accurate, specific and robust. Proposed method has successfully applied for quantification of favipiravir in pharmaceutical formulations.

Spectrofluorimetric method for determination of favipiravir. Different factors effecting fluorescence were carefully studied. The proposed method is based on measuring native fluorescence of favipiravir IN 0.2 M borate buffer at 432 nm after at 361nm. Relationship between favipiravir concentration and relative fluorescence intensity. The method was successfully implemented for determination of favipiravir in its pharmaceutical formulation.

Key words:

Favipiravir antiviral HPLC method spectrofluorimetric method



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A Detailed Insight into Down's Syndrome

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ABSTRACT:

Down syndrome (DS) is a birth defect with significant medical and social costs that is caused by trisomy of all or part of chromosome 21. It is the most common genetic disease in the world and the most common genetic cause of intellectual disabilities, affecting approximately 1 in 400-1500 newborns. Despite the fact that the syndrome had been described thousands of years before, it was named after John Langdon Down, who described it clinically in 1866. Scientists have discovered candidate genes that play a role in the development of specific DS features. These advancements, in turn, may aid in the development of targeted therapy for people with trisomy 21. Screening for Down syndrome is an essential part of routine prenatal care. Until recently, noninvasive screening for aneuploidy relied on maternal serum analytes and ultrasonography. Recent advancements have resulted in the development of a noninvasive prenatal screening (NIPS) test that uses cell-free foetal DNA sequences isolated from a maternal blood sample. There is a discussion of those accomplishments.

Key Words: Down syndrome, trisomy 21, prenatal diagnosis, chromosome abnormality, cell-free fetal DNA (cffDNA); noninvasive prenatal screening (NIPS)



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NATIONAL RARE DISEASES POLICY- INDIA-2021- AN OVERVIEW

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BACKGROUND:

The government has finalized National Policy for Rare Diseases, 2021 and put in the public domain. The policy aims to reduce the incidence and prevalence of rare diseases through an integrated and comprehensive preventive strategy that includes awareness generation, premarital, post-marital, pre-conception, and post-conception screening and counselling programmes to prevent the birth of children with rare diseases, and, given resource constraints and competing health care priorities, enable access to affordable health care to patients of rare diseases[1].

The policy establishes a National Consortium for Research and Development on Therapeutics for Rare Diseases, with an expanded mandate that includes research and development, technology transfer, and therapeutic indigenization for rare diseases. The Department of Health Research (DHR) will convene it, and the ICMR will be a member[2].

Under the Policy, the central government will provide financial support up to Rs 20 lakhs under the Umbrella Scheme of Rashtriya Arogya Nidhi for treatment of those rare diseases that require a one-time treatment listed in Group 1. Beneficiaries for such financial assistance would not be limited to BPL families, but would be extended to approximately 40% of the population who are eligible under the Pradhan Mantri Jan Arogya Yojana for treatment only in government



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MECHANISTIC STUDY OF RISK FACTORS OF RHEUMATOID ARTHRITIS AND ITS ASSOCIATION WITH ENDOTHELIAL DYSFUNCTION, ATHEROSCLEROSIS AND INFLAMMATION - A REVIEW

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Abstract:

Rheumatoid arthritis (RA) is a chronic autoimmune disease that mainly affects the lining of the synovial joints, which are characterized by painful, swollen joints that can severely impair body function and quality of life. Risk factors of RA involve age, gender, genetics, and environmental exposure (smoking, air pollution etc.). RA, leads to the activation of endothelial cells (ECs). Leukocyte adhesion molecules are activated due to activation of ECs which induce atherosclerosis. Endothelial (ED) dysfunction is considered to be a failure of endothelial remodeling processes.

Atherosclerosis is a condition of inflammation which alters endothelial functioning and promotes response to injury, associated with increased exposure to adhesion molecules. Inflammatory cytokines such as IL-6, TNF α , are independent of predicting subsequent atherosclerosis. Endothelial dysfunction is an autoimmune diseases of RA involve body's immune response like macrophages and dendritic cells may be helpful in diagnosing atherosclerosis and endothelial dysfunction.

Symmetric (SDMA) and asymmetric (ADMA) dimethylarginines are biomarkers (CVD) in many areas of



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A DETAILED REVIEW ON COMPLETE UNDERSTANDING OF MIGRAINE AND ITS TREATMENT

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ABSTRACT:

Migraine is a disabling primary headache disorder that directly affects more than one billion people worldwide including children. Migraine is the third most prevalent illness in the world. Despite its widespread prevalence, migraine remains under-diagnosed and under-treated. There is very little known about migraine for several years, however in the last few decades, considerable advances in our understanding of migraine and its pathophysiology have paved the way for better understanding of the disease condition. Migraine is of several types among which Migraine with Aura, Migraine Without aura and chronic migraine are frequently seen among patients. Migraine has strong genetic component (80% of people with migraine tend to have familial histories of the disease.) and known triggers that induce pain. ICH-3 guidelines were used in diagnosis of Migraine and there are many acute and preventive migraine treatments that are proved to be effective in migraine. Acute treatment is either specific (triptans and ergots) or non-specific (analgesics). Preventive treatment decreases migraine frequency and improves quality of life. Recent advances led to development of newer classes of drugs like CGRP antagonists namely gepants and 5-HT_{1F} receptor agonists—namely ditans were also included. Despite of various pharmacological treatments available there is a strong need in clinical practice for alternative approaches for both acute and preventive treatment due to limited efficacy and poor toleration of pharmacological treatment in some patients.

This review tends to provide a complete overview of Migraine disorder that includes types, etiology, epidemiology, pathophysiology, ICH guidelines for diagnosis, current available Treatments of migraine with special emphasis of FDA approved novel drugs in last 5 years and also various non-pharmacological treatments available and lifestyle management of patients with Migraine.

Keywords: Migraine, Classification, Pathophysiology, Therapy, Novel Drugs, Non Pharmacological Therapy



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PATHOPHYSIOLOGY, DIAGNOSIS AND TREATMENT OF I & II BIPOLAR DISORDERS – A DETAILED REVIEW

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ABSTRACT:

Bipolar disorder is a chronic and complex mood illness characterized by a combination of manic and depressive episodes. Manic depressive disorder is another name for bipolar disorder. Periods of mania, hypomania, psychosis, or sadness, as well as mood fluctuations, are all symptoms. Bipolar disorder sufferers experience a lot of mental health issues and medical problems.

Bipolar disorder is better treated if it is diagnosed and treated early. The occurrence of at least one lifetime manic episode is a required component of Bipolar 1 disorder. At least one hypomanic episode and one major depressive episode are required for Bipolar 2 disorder. Eighty percent of patients experience more than four episodes in their lives, and the duration between episodes is shorter as they get older. Suicide attempts are made by up to 50% of The Patients. Rapid cycling can be caused by a variety of factors, including biology Biological-rhythm, dysregulation, antidepressant or stimulant usage, hypothyroidism, and premenstrual and postpartum conditions.

In mixed states, manic episodes, and Bipolar 1 disorder, antidepressant monotherapy is contraindicated. Screening for suicidal thoughts and substance misuse, evaluating adherence to treatment, and identifying metabolic consequences of medication are all part of patient maintenance care. Body weight management decreases problems and improves lipid control. Patients and their support system should be educated about mood relapse, Suicidal ideation, and the effectiveness of early interventions to reduce complications.

In the current review we will be discussing the different types of bipolar disorders, its diagnosis, treatment and management practices.

Key Words: Primary Care, Bipolar Disorder, Managed Care, Mental Health, Psychological Stress.

INTRODUCTION:



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The Impact Of The Covid-19 Pandemic On Maternal And Preinatal Health – A systematic Research from databases

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ABSTRACT:


Introduction:

The Covid-19 epidemic has direct and indirect consequences on maternal health, and the direct and indirect effects are interwoven. We did a scoping assessment to provide a full understanding of this wide topic in a timely manner, as befitting an emerging pandemic.

Methods:

A scoping study was done to consolidate evidence on the pandemic's direct and indirect effects on maternal health, as well as to provide a summary of the most important outcomes to date. In order to capture rapidly evolving updates, working papers and news articles were considered appropriate evidence alongside peer-reviewed publications. If it related to the direct or indirect effects of the COVID-19 pandemic on the physical, emotional, economic, or social health and wellbeing of pregnant women, literature in English published between January 1st and September 11th 2020 was included. The authors wrote narrative summaries on the subject areas where they discovered the most evidence.




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THE EFFECTS OF SMOKING, ALCOHOL AND DRUGS ON CARDIOVASCULAR SYSTEM- A SYSTEMATIC REVIEW ON CARDIOLOGY DISEASES

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ABSTRACT:

Tobacco use is a leading cause of morbidity and mortality from cardiovascular disease (CVD). There is little evidence linking smoking to various subtypes of CVD, both fatal and non-fatal outcomes. Current smoking increases the risk of nearly all CVD subtypes, at least doubling the risk of many, including AMI, cerebrovascular disease, and heart failure. Paroxysmal tachycardia is a newly discovered smoking-related risk. The effects of alcohol on cardiovascular (CV) health are complex. The links between alcohol consumption and CV diseases such as hypertension, coronary heart disease, stroke, peripheral arterial disease, and cardiomyopathy have been extensively researched and are summarised in this review. Although many behavioural, genetic, and biologic variants influence the link between alcohol use and CV disease, the dose and pattern of alcohol consumption appear to be the most influential. Several drug classes may cause heart failure in patients who do not have concurrent cardiovascular disease or may hasten the onset of heart failure in patients who already have left ventricular impairment. Using the MEDLINE database and lateral references, we conducted a review of the literature on drug-induced heart failure.

Key words:

Alcohol consumption, Drug induced diseases, Tobacco consumption, Cardiovascular problems



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EVALUATION OF QUALITY OF PRESCRIPTION USING PRESCRIPTION QUALITY INDEX TOOL – A COMPARITIVE STUDY IN CARDIOLOGY, NEPHROLOGY & ONCOLOGY DEPARTMENTS IN TERTIARY CARE HOSPITAL

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ABSTRACT:

The aims were to develop a new Prescription Quality Index (PQI) for the measurement of prescription quality in chronic diseases. The PQI were developed based on 3 separate surveys and one pilot study. Criteria were developed based on literature search, discussions and brainstorming sessions. Validity of the criteria was examined using modified Delphi method. Pre testing was performed on 18 patients suffering from chronic diseases. The modified version was then subjected to reviews by pharmacists in a survey. The score based PQI with 22 criteria was then tested in 150 patients in Cardiology, Nephrology and Oncology departments. Results were analyzed using SPSS version 12.0.1. Exploratory principal components analysis reveals that, multiple factors contributing to Prescription Quality Index. Cronbach's α for the entire 22 criteria was 0.60. The reliability was good to moderate stability (intraclass correlation coefficient 0.76 and 0.52 respectively). The PQI was significantly and negatively correlated with age (correlation coefficient – 0.34, $P < 0.001$) Number of drugs in prescription (correlation coefficient – 0.51, $P < 0.001$) and number of chronic diseases/ conditions (correlation coefficient – 0.35, $P < 0.001$). The PQI is a promising new tool for measuring prescription quality. It has been shown that the PQI is a valid, reliable and responsive tool to measure quality of prescription in chronic diseases.


KEYWORDS: Chronic diseases, Prescription quality index, Cardiology, Nephrology, Oncology.

INTRODUCTION:

Prescribing practice is far away from ideal prescription. Poor quality of prescribing is a matter of concern at all healthcare levels. This indicates a need for pharmacy and medical educators to further emphasize the importance of writing clear and complete prescriptions. It also calls for the implementation of educational program and monitoring specific program to bring more awareness to all concerned so as to minimize the occurrence of prescribing errors and improve quality of prescribing. For monitoring, the prescription audit is a commonly used method. Different types of drug use studies evaluating the quality of prescribing are reported from all over the world. However, one of the great limitations in measuring the quality of prescription is lack of a method that is sufficiently valid and reliable to allow systematic use in clinical setting.[1]

There is a need for the development of a new tool for Prescription Quality Index (PQI) which has to be




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EVALUATION OF ANTI-DIARRHEAL & ANTI-SPASMOLYTIC AND INVITRO ANTI OXIDANT PROPERTIES OF METHANOLIC EXTRACTS OF LANTANA CAMARA AND MYRTUS COMMUNIS

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ABSTRACT

Presently, around 25% of medications produced in the globe, are extracted straight from plants or herbs contains at least one active component. It is acknowledged that the popular of herbal medicines employed as antidiarrheals have antispasmodic characteristics consequential in delaying gastrointestinal procedures, inhibiting gut motility, initiating absorption of water and dropping electrolyte discharge in the process, and these biological activities might explain the benefits of by means of specific herbal medicines in the management and treatment of diarrhoea. The main aim of the study is to screen Myrtus communis and Lantana camara extracts for their anti-diarrheal and anti-spasmodic activity. This study was intended to assess the antidiarrheal activity of the selected herbs by means of Swiss albino mice models against castor oil stimulated diarrhea, castor oil stimulated gastrointestinal transit, and castor oil stimulated accumulation of gastrointestinal fluid. In the execution of antimotility, diarrhea, and anti-secretory agent are seem to be the chief stay agents utilized to drop off the pathophysiologic circumstances accountable for the progress of diarrhea. The inhibitory force of loperamide on acetylcholine cause inhibition of discharge intervened with acetylcholine. As an outcome, loperamide lessen every day fecal volume, reduce fluid and loss of electrolyte, and may perhaps augment viscosity of stool and bulk density. Coming to the Myrtus communis and Lantana camara, the result of the study verified that the plant extracts was caused a noteworthy impediment in the onset of diarrhea, reduction in the occurrence of output of wet fecal and total fecal, along with diminish in the mean weight of wet feces and output of total fecal that were caused by means of castor oil. The plants extracts established a noteworthy delay in the onset of diarrhea, abridged the occurrence of wet feces and also endowed with noteworthy anti-secretory effects at all doses assessed experimentally. And also, the plants extracts signified the antimotility activity at its higher doses.

Keywords: Lantana camara, myrtus communis, anti-diarrhea, anti-spasmodic

INTRODUCTION:

Herbal plants importance:

The utilisation of plants in the treatment of certain human diseases is evidence of man's ingenuity. The contribution of these plants to the therapeutic arsenal in the fight against diseases dates back several centuries, and has, to a certain extent, been documented by the ancient Chinese, Indian and North African civilisations¹⁻³. As the fact that traditional health care is highly sought after in terms of certain cultural elements in the lives of the individuals in the societies⁴. In southern Africa, a large proportion of the population still uses traditional remedies. More than 700 plant species are being traded for medicinal purposes throughout South Africa, in the informal medicinal plant market. It is evident that, even though scientific advances have been made in our quest to understand the physiology of the body, biotechnology and the treatment of disease, natural products remain a crucial component of the comprehensive health care strategy for the future^{5,6}.

The World Health Organization (WHO) defines traditional medicine as the "diverse health practices, approaches, knowledge and beliefs incorporating plant, animal, and/or mineral based medicines, spiritual



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SYSTEMATIC DETAILS ABOUT NUTRITION SUPPLEMENTATION IN PREGNANT WOMEN

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ABSTRACT:

Nutrition is very important in the body since it aids in growth and development. Prenatal nutrition is critical for the baby's healthy growth and development. Both the mother and the foetus require high-quality meals, as well as micro and macro nutrients. Fruits, vegetables, a low-fat diet, and dairy are all important for a child's birth weight. Deficiencies arise as a result of the increased demand for energy and nutrients by both the mother and the child during pregnancy. Vitamins play an important role in the body, although hypovitaminosis is common among pregnant women. Vitamin D is crucial for the mother's health as well as the children's long-term health. Calcitriol is the active and hormonal metabolite of vitamin D. Low vitamin B12 levels during pregnancy put the offspring's metabolism at danger. In the first trimester, maternal consumption of milk, fresh fruits, and nuts acts as a protective factor, reducing neural tube abnormalities. Maternal nutrition also plays a role in the risk of future hypertension in the offspring. The provision of folic acid and



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KAP STUDY ON BREAST CANCER AMONG WOMEN IN NIRMALA EDUCATIONAL INSTITUTIONS- A PROSPECTIVE OBSERVATIONAL STUDY

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INTRODUCTION:

Breast cancer growth is disease that creates in breast cells. Ordinarily, the disease frames in either the lobules or the conduits of the breast. Lobules are

the organs that produce milk, and pipes are the pathways that carry the milk from the organs to the areola. Malignant growth can likewise happen in the greasy tissue or the stringy connective tissue inside your breast. The uncontrolled disease cells frequently attack other sound breast tissue and can venture out to the lymph hubs under the arms. The lymph hubs are an essential pathway that help the cancer cells move to different pieces of the body[1]



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Determination Of Iron In The Marketed Dosage Forms And Supplements Using Colorimetric And Titrimetric Methods Of Analysis

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ABSTRACT:

A comparative study of the determination of iron in iron tablets was carried out using colorimetric and titrimetric methods of analysis. The work presented here reports on optimization of phenanthroline method. The maximum absorbance was found to be at 520nm wavelength. A calibration curve was found to be linear up to the concentration range of 0.8 µg/ ml to 3.60 µg/ ml and 10 µg/ ml. total three pharmaceutical samples from different pharmaceutical companies were analyzed and results were compared with the results obtained by standards. The study showed that the total iron concentration in pharmaceutical samples. These values are in good agreement with pharmacopeia range.

Key Words:

Colorimetry, Titrimetry, o-phenanthroline, ferrous fumarate, ferric ammonium citrate, ferric carboxy maltose, ferrous sulphate, ferrous ammonium sulphate, iron, concentration, absorbance, calibration curve, wavelength.




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A REVIEW ON DIABETES: ARTIFICIAL PANCREAS

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Abstract:

Diabetes is a major problem in the world wide. It is a chronic disease. In human body insulin Plays a vital role in blood glucose levels. The Pancreatic gland is in GIT system which produce insulin hormone. It maintains the normal glucose level in blood. Imbalance of insulin levels leads to diabetes. The diabetes characterizes to type 1 is an insulin dependent disease and type 2 diabetes is insulin resistance disorder. Recently gestational diabetes discovered, is caused by genes or imbalance of insulin levels in before labour. To treat the diabetes in present days there is allopathic and herbal medication which drugs are used in now a day for diabetes. Allopathic medicines have therapeutic actions and also these drugs have side effects which leads alteration in body functions furthermore it causes severe health problems for that reason most of people using herbal medicines for treating the diabetes. If any person suffering with diabetes slowly it leads complications in human body. It effects on CNS, kidney and eyes etc. The most common symptoms for diabetes are thirst increases, vision in hazy and fatigue etc. To prevent from the diabetes, use anti-diabetic agents, avoid carbs in diet, eat fiber content food and exercise these activities control the diabetes. Artificial pancreas acts like as pancreas gland it produces the insulin like as natural pancreas gland. To diagnose the diabetes there is 3 main tests. statistical analysis of diabetes is year wise from 2014 upto 2019. Diabetes is controlled by proper medication by patient.



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**PHARMACOLOGICAL AND PHYTOCHEMICAL
CONSTITUENTS, TRADITIONAL USES ON ACALPHYA
INDICA LINN: A REVIEW**

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IN-VITRO EVALUATION OF ANTI-DIABETIC ACTIVITY OF ETHANOLIC EXTRACT TRICHOLEPIS GLABERRIMA

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Abstract

Tricholepis glaberrima commonly known as "Brahmadandi" belongs to the family Asteraceae. It is prominently used by traditional healers as an aphrodisiac. The plant contains several phytochemical constituents such as carbohydrates, flavonoids, tannins, steroids and triterpenoids and glycosides. Even though so many allopathy are available but can act certain extent only, hence there is a need for the traditional formulation development. With this aim we have started the research. In this research we aimed to evaluate the anti-diabetic activity of ethanolic extract *Tricholepis glaberrima* using *In-Vitro* process. The dried root of *Tricholepis glaberrima* was extracted with ethanol & was prepared by soxhlation using soxhlet apparatus with ethanol as a solvent extract evaluated for anti- diabetic activity by *In-vitro* (i.e., by α -amylase inhibition assay, α -glucosidase inhibition assay). From the results ethanolic extract *Tricholepis glaberrima* has exhibited significant anti-diabetic activity.

Key words: *Tricholepis glaberrima*, Albino rats, Anti-diabetic activity, *In vitro*, Alpha amylase inhibition assay, Alpha



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PREPARATION AND EVALUATION OF POLYHERBAL ANTIFUNGAL CREAM

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ABSTRACT

During the latter part of the 20th century herbalism has become main stream worldwide. This is due in part to the recognition of the value of traditional and indigenous pharmacopias, the incorporation of some derived from these sources into pharmaceuticals, the need to make health care affordable for all and the perception that natural remedies are somehow safer and more efficacious than remedies that are pharmaceutically derived. Through the world, there has been an increasing incidence of fungal infections, and because of drug resistance and toxicity associated with long term treatment with antifungal drugs, search for new drugs to treat fungal infection is ongoing. The aim of the present study was to formulate poly herbal anti-dermatophytic antifungal cream containing extracts of *Sapindus trifoliatus* & *Manilkara zapota*. One general best cream formulation was selected from the standard books and prepared formulation was evaluated for its efficacy, uniformity, stability and appearance. The final product was a w/o emulsion cream with suitable appearance and desirable physicochemical stability. Due to the stability of the extract in the cream formulation, it can be used for treatment of fungal skin infections.



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HERBAL DRUG INTERACTIONS

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Abstract:

Introduction: Herbal drug interactions is any modifications caused by herbal substances to another prescription medication on the body.

Consequences can be beneficial, undesirable and harmful effects. The importance of herbs and drugs can be administered in combination with different drugs. Consequently, the mechanism of herbal drug interactions remains an understudied area of pharmacotherapy. Systematic evaluation of herbal product drug interaction liability and characterizing the interaction potential of such constituents. To estimate the pharmacokinetics of individual facilitative prospective identification of herbal drug interactions.

Objective: Herbal type of interactions are a type of interactions where the incompatibility between the dosing of Herbal medications in different time intervals. Almost 70% of world has been using this herbal medication as an alternative source for that has grown tremendously in developed countries as well as developing countries. Due to increase in consumer data, the efficacy and safety has been elevated. Herbs are often administered with therapeutic drugs for major treatments.

Conclusion: In our view we highlight the importance of herbal medicines, reasons for herbal drug interactions and pharmacokinetic and pharmacodynamics effects of herbal drugs. As well as the static data of herbal drug interactions and the majority of people using this herbal medicines, search range of population to herbal medicines, advantages and disadvantages of herbal drugs and its interactions and plants which are reported for herbal drug interactions including clinical outcomes by reducing the herbal drug interactions.



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AYURVEDIC REMEDIES OF MYOCARDIAL ISCHEMIA

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ABSTRACT:

Myocardial ischemia is defined as a diseased condition which is caused by reduced oxygen supply in a blood flow of coronary artery due to atherosclerosis and occlusion of an artery by a thrombus. Myocardial ischemia is caused by blockage of coronary blood flow by coronary plaques, blood clot and shrinking of macro vascular coronary arteries in the estrogen hormone state. The impaired fibroblast regulation is involved in the immuno pathogenesis of a wide variety of cardiovascular diseases and therefore is an important therapeutic target.

Keywords:

Myocardial ischemia, Atherosclerosis, Arteries.

INTRODUCTION: Ischemic heart disease is one of the leading causes of disease worldwide. Myocardial ischemia is defined as imbalance between oxygen supply to the coronary artery due to atherosclerosis and occlusion of an artery by a thrombus. They result in partial or complete blockage of heart arteries and leads to sudden death. (1,2)



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COMPARITIVE STUDY ON INDIAN SPICES FOR CLOVE, CINNAMON, CORIANDER.

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Abstract:

Clove (*Syzygium aromaticum*) Coriander (*Corundum sativum*) and Cinnamon (*Cinnamomum verum*) are most used spices in India and some other parts of the world. These plants are mostly grown in the areas like indonesia, northern africa, south western asia, and some europaen countries. These spices are rich in biotic compounds like aldehydes, terpenoids, flavanoids, phenolic acids, tannins, linalool, linolenic acids, and vitamins which shows some bioactive functions like anti-diabetic, anti-viral, anti-cancer and anti-ulcer activity. In addition to the basic bioactive compounds like they are also rich in essential oil compounds namely eugenol, α -humulen, β -pinene, limonene are present in clove, whereas essential oils like linalool, geraniol, α -pinenes, γ -terpenes are present in coriander, whereas in cinnamon camphor, cinnamaldehyde, α -bergamotene, β -caryophyllene, eugenol etc are present. In addition to these bioactive functions these are also used as a spice in making of some recepies and acts as household medicines for treating Dental pain, GIT disorders, hay fever, mouth freshener etc.

Keywords: *Eugenia caryophyllus* (clove), *Cinnamomum gelanicum* (cinnamon), *Coriandrum sativum* (coriander), HPLC analysis, Anti-oxidant activity.



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A REVIEW ON HYPERTROPHIC CARDIOMYOPATHY

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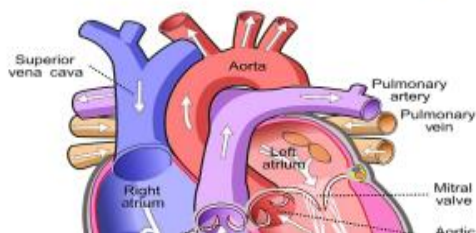
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ABSTRACT:

Hypertrophic Cardiomyopathy is hereditary heart disease with clinical and pathological manifestations. It affects the left ventricle and is mostly caused by increased ventricular thickness (hypertrophy) with no clear reason. This causes left ventricular outflow blockage, diastolic dysfunction, myocardial ischemia, and mitral regurgitation. It is also a leading cause of sudden cardiac death, particularly in teenagers and young adults.

Hypertrophic Cardiomyopathy (HCM) is caused by mutations in one of the multiple genes; the most often affected genes are MYH7, MYBPC3, TNNT2, and TNNI3. Proteins generated by genes serve a crucial part in the contraction of cardiac muscle units known as "sarcomeres." MYH7 and MYBPC3 gene mutations account for about 80% of HCM. Many people who have the HCM disease gene do not have a clinically evident illness. Shortness of breath, and decreased blood filling of the ventricles, angina, palpitations, lightheadedness, weakness, fainting, and sudden cardiac death are all signs of HCM. Surgery, an implanted device, or medicine to reduce or control the heart rate may be used as treatment. However, it is unclear how mutations in sarcomere-related genes produce hypertrophy of heart muscle or the symptoms of familial HCM.

Keywords: Hypertrophy, cardiomyopathy, gene mutation, sarcomere, palpitations, angina.



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A REVIEW ON NANO TECHNOLOGY

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ABSTRACT:

Nanotechnology has created one of the most dynamic science & technology domains at the confluence of physical sciences, molecular engineering, biology & medicine. It includes better understanding of living systems, synthesis of new drugs and their targeted delivery, Neuromorphic engineering & developing a sustainable environment. The reduction of drug particles into submicron range leads to a significant increase in the dissolution rate & therefore enhances bioavailability. Targeting delivery of drugs to the diseased lesions is one of the most important aspects of drug delivery system. Various polymers have been used in the formulation of nanoparticles of drug delivery research to increase therapeutic benefit while minimizing the side effects. This review article presents the most understanding contributions in the field of nanotechnology as drug delivery system.



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AMPHIPHILIC DRUG DELIVERY SYSTEMS-PHYTOSOMES

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ABSTRACT –

The term “Phyto” means plant while “some” means cell-like. Phytosome is a novel drug delivery technique which contains phytoconstituents of herbal extracts. Preparation of phytosomes involve in the complexation between phytoconstituents and phospholipids especially with phosphotidylcholine which produces lipid stable molecular complexes. Phytosomes have water soluble inner layer and lipophilic outer layer. Phytosomes have high pharmacokinetic and pharmacodynamic properties. They have improved bioavailability when compared to other conventional herbal extracts. They have valuable role in pharmaceutical industries. Phytosomes can be supplied as natural digestive aids as they acts as antioxidants, hepatoprotective agents, anticancer agents and used as carriers for water soluble and lipid soluble nutrients.

KEYWORDS - Drug delivery, Phytosome, Phosphotidylcholine (PC), Phospholipids complex, Bioavailability, Flavonoids, Liposomes.

INTRODUCTION –

Biologically active constituents of plants are mostly polar in nature and water soluble. The utilization of these compounds is restricted due to problem in absorption and decreased bioavailability. In order to improve bioavailability, plant products must maintain proper homeostasis between hydrophilic and lipophilic properties. ⁽¹⁾

Plant products are widely used in traditional as well as modern medicine system. Recently novel drug delivery system has been developed for several active constituents. Novel drug delivery system provides targeted and sustained release of drug, this helps in achieving pharmacological effect at low dose. Herbal medicines cure human diseases with lesser side effects. ⁽²⁾

Most of major constituents (flavonoides, glycosides) of plants are easily soluble in water. They show less therapeutic effect when applied topically as they are bounded in their potency due to hydrophobic nature. ⁽³⁾Such drugs are formulated in targeted drug delivery systems such as phytosomes and liposomes since they are more available than conventional herbal extracts.



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SYSTEMATIC ANALYSIS OF EMU OIL

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ABSTRACT

Emu scientifically known as *Dromaius novaehollandiae* is the second largest living flightless bird of world belonging to order Ratite. Emu, the flightless bird native to Australia and found in many countries, is receiving much attention for its nutritional benefits as well as its medicinal value [1]. Emu's are nurtured in many parts of the world for their meat, oil, skin and feathers, which are of high economic value. The anatomical and physiological features of these birds appear to be suitable for temperate and tropical climatic conditions [2].

Emu oil is semi solid white mass, which is generally located all along back of bird, but when it is processed and refined it is a clear liquid [3]. It has high levels of polyunsaturated fatty acids and antioxidants in it. It also has a hypocholesterolaemia effect, transdermal penetration enhancing activity, cosmetic and insect repellent activity, and so on [1]. Emu oil will have a high permeability when applied to human skin due to its fatty acid content. It is also being used to treat various conditions including arthritis, skin treatments, burn injuries, hair loss, etc. It act as wound healing agent, reduces recent keloid scarring and excellent emulsifier [3].



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POLY HERBAL FORMULATION: A PROMISING MEMORY- ENHANCER IN WISTER RATS

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Abstract:

Dementia is a general term for loss of memory ,problem- solving ,and other thinking abilities that are serve enough to interfere with daily life .Alzheimer's is the most common cause of dementia.Alzheimers disease is a progressive neurodegenerative disorder characterized by a gradual decline in memory. The occurrence of Alzheimer's disease is common place among the Asian population, particularly among senior citizens. The present study under taken to assess the of poly herbs as a memory –enhancer .healthy adult rat of Wister strain of either sex were employed in the present investigation .Elevated plus-maze and Y-maze method served as the exteroceptive behavioural models .and scopolamine ,and aging-induced amnesia served as the interoceptive behavioural models. Herbal drugs have shown the promising effect in the treatment of memory loss. Nootropic popularly referred as smart drug to improve memory such as Piracetam, Amiracetam, and cholinesterase etc., will improve the memory. However these drugs have severe adverse effects, so to overcome to this effect there is a vast experience of traditional drugs to enhance the memory activity

.Key words:poly herbal formulation ,dementia, Nootropic

Introduction:

Dementia:

According to the definition provided by the World Health Organisation (WHO,2017), dementia is an “ an



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REVIEW ON HIBISCUS PLANTIFOLIUS

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ABSTRACT:

Medicinal plants or botanical medicines have been used traditionally by mankind for the prevention and treatment of various ailments. The plant kingdom plays a vital role in the life of human beings and animals. The plants are the major source of various compounds that are widely used in pharma industries and other nutraceutical sectors. *Hibiscus Plantifolius* is a climber under Malvaceae family. This is one of the much unexplored medicinal plants. The present work has been taken up to review the plant *Hibiscus Plantifolius* focusing on its taxonomical, pharmacological, chemical, biochemical, and ethno medicinal uses and to contribute this knowledge for further extensive studies on this plant.

Key words: *Hibiscus Plantifolius*, Malvaceae, nutraceutical, ailments

INTRODUCTION:

Medicinal plants have been a part of the human life for thousands of years. The rise in population, inadequate supply of drugs, side effects of allopathic medicines, resistance to drugs and high cost treatments have made human beings to use plant as a source of medicine for a variety of diseases. Green plants which are usually the reservoir of many biochemical products can be extracted and used for various scientific experiments thus leading to the development of plant based non-toxic, non-reactive product.[1-2]



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“ANTI-THYROID ACTIVITY OF BERRY POWDER OF *Hippophae rhamnoides* AGAINST THYROXINE INDUCED HYPOTHYROIDISM”


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ABSTRACT:

The present research work is to evaluate the Anti-thyroid potential of *Hippophae rhamnoides* [sea buckthorn] in Albino Wister rats. **Methods:** *Hippophae rhamnoides* were used to treat infections, slows down the aging process, improves sight and also used to treat BP (Blood Pressure) heart and liver diseases, common cold, gout, high cholesterol, ulcers and to reduce weight. The Anti-Thyroid activity of sea buckthorn was studied by inducing hyperthyroidism in albino Wister rats by administering Thyroxine orally for 14 days. After 14 days, collect the blood samples from the eye and check the levels of T₃, T₄ and TSH. From 15th day, administer the sea buckthorn berry powder and Methimazole (standard) for 6 days (21st day) **Results:** In present study, it was found that thyroxin increases the levels of T₃, T₄ and TSH i.e., Hyperthyroidism. By administrating Sea buckthorn berries powder, lowers the increased levels of T₃, T₄ and TSH when compared to standard drug (Methimazole).

Keywords: Thyroid, Sea Buckthorn, Elisa test




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12 PRINCIPLES OF GREEN CHEMISTRY

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Abstract:

It is also called sustainable chemistry, is a philosophy of chemical research and engineering that encourages the design of products and processes that minimize the use and generation of hazardous substances. Green chemistry is about reducing waste, material, hazard, risk, energy, and cost. In this we will discuss about twelve principles of green chemistry Prevent waste, Maximize atom economy, Design less hazardous chemical syntheses, Design safer chemicals and products, Use safer solvents and reaction conditions, Increase energy efficiency, Use renewable feedstocks, Avoid chemical derivatives, Use catalysts, not stoichiometric reagents, Design chemicals and products to degrade after use, Analyze in real time to prevent pollution, Minimize the potential for accidents

Key words: Sustainable chemistry, green chemistry, atom economy

Introduction: Green chemistry is the design of chemical products and processes that reduce or eliminate the use or generation of hazardous substances. Green chemistry applies across the life cycle of a chemical product, including its design, manufacture, use, and ultimate disposal. Green chemistry is also known as sustainable chemistry.



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AN OVERVIEW ON DIABETES

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Abstract

Diabetes mellitus is a multifactorial disease that requires long-term care since it involves major changes in both physical and psychosocial dimension of each patient. Diabetes education is a critical element of care that improves patient outcomes. Aim: the aim of the present study was to review the literature about the education in diabetes mellitus management. Method: the method of this study included bibliographic research of the literature from reviews and researches, mainly in the pubmed data base, which referred to education in diabetes mellitus management. Pubmed was searched using the following key search terms: “diabetes mellitus”, “self-management”, “education” while the research covered the period 1999-2012. Results: according to the literature, education should not be a mere transmission of information, but a dynamic, holistic, planned care based on individual’s needs (patient-centred approach). Furthermore, education promotes self-management and health-related behaviour




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A REVIEW ON HERBAL DRUGS USED IN TREATMENT OF MUCORMYCOSIS

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ABSTRACT

Across the globe and mainly in India, several cases of *mucormycosis* in people with COVID-19 have been increasingly reported. The rise in the number of cases, the emergence of new risk factors and causative agents, mortality associated with mucormycosis in India is considerably high and the challenges in managing the disease..Mucormycosis is a rare but often fatal disease caused by certain fungi. It is sometimes called zygomycosis or phycomycosis. It is an opportunistic infection that typically develops in patients with weakened immune systems, diabetes, kidney failure, organ transplants, or chemotherapy for cancer. Antifungal drugs like amphotericin B, posconazole and isavuconazole are used for the treatment of Mucormycosis. In this we discuss about the herbal drugs used in the treatment of Mucormycosis.

KEYWORDS: Mucormycosis, Amphotericin B, Posconazole, Isavuconazole, Chemotherapy.




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A REVIEW ON ARTIFICIAL BLOOD

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ABSTRACT:

Blood is one of the most demanding sources in clinical and medical aspects due to its vital roles in man's day-to-day life. It is highly impossible to survive without it. But in 21st century due to increased population, population aging, generation of new infections and natural disasters increased the cost of storage and maintenance of collected blood. This has directed the world to find an alternate source i.e. artificial blood. Artificial blood is an innovative concept of transfusion of medicine where specifically designed compounds perform the task of transport and delivery of oxygen in the body to replace the functions of allogenic human blood transfusion. It is one of the evolutionary innovations which might lead the way to a new era in medicine. In this review, the importance of artificial blood is high-lighted and also the present status and improvement in the development of artificial blood substitutes mainly focusing on red blood cells substitutes are summarized. In addition, some of the promising benefits and disadvantages of this concept are also elaborated.

KEYWORDS: Artificial blood, oxygen carriers, hemoglobin, red blood cells

INTRODUCTION:

There has been a need for replacement of blood for as long as patients have been bleeding to death because of a serious injury. According to the medical folks, the ancient Incas were responsible for the first recorded blood transfusion¹. No real progress was made in the development of the blood substitutes until 1616. When William



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