HPPIC 2K16

2nd Indo-Korean Conference on
Herbals and Pharmaceuticals: Pivotal Issues & Concerns

On 30th March 2016

Organized by

GOKULA KRISHNA COLLEGE OF PHARMACY
Sullurpeta

In Association with

Association of Pharmacy Professionals
Andhra Pradesh State Branch

Scientific Partner

Journal of Comprehensive Pharmacy
(An Official Journal of L&L Publications)
www.jcponline.in

Pharmacognostical, phytochemical screening and antioxidant evaluation of leaves of *Myxopyrum smilacifolium b.* & *Pamburus missionis*

Raveesha P*[1], Chandra Sekhar KB[2]

*[1]*Department of Pharmacognosy, V.V. Institute of Pharmaceutical Sciences, Gudlavalleru-521356, A.P., India.*

[2]*Department of Chemistry, JNTUA - Oil Technological Research Institute, Ananthapuramu, A.P., India.*

Email: raveesha.peeriga@gmail.com

OPCG01

ABSTRACT

Traditional medicinal plants were used for the treatment of various diseases from many centuries where gained their importance in traditional knowledge periodically. *Myxopyrum smilacifolium Blume & Pamburus missionis* is a twining shrub and herb belongs to the family Oleaceae and Rutaceae respectively. *Myxopyrum* and *Pamburus* are used traditionally in the treatment of rheumatism where other uses of Myxopyrum are cephalalgia, notalagia and otopathy. Scrutinization of literature revealed that there is a lack of pharmacognostical and phytochemical investigations of *Myxopyrum smilacifolium* and *Pamburus missionis*. The current study deals with the preliminary phytochemical screening, detailed pharmacognostical study of leaf of both *Myxopyrum smilacifolium Blume* and *Pamburus missionis*. The *in-vitro* antioxidant activity of leaf extract of *Myxopyrum smilacifolium Blume* and *Pamburus missionis* were also evaluated. The detailed study of pharmacognostical evaluation showed the presence of thick walled epidermal cells covered with thick cuticle, xylem and phloem elements, Glandular trichome and slightly concave collateral vascular bundles where in *Pamburus missionis* revealed the presence of lignified xylem vessels and secretory canals. Preliminary Phytochemical examination of both species revealed the presence of various phytoconstituents viz., alkaloids, glycosides, tannins, saponins etc., The fluorescence analysis manifested the behavioral variation of the powdered drug. *Myxopyrum smilacifolium* Blume *and Pamburus missionis* had shown good antioxidant property when compared with the standard curcumin.

Key words: Oleaceae, Microscopy, Phytochemical screening, Standardization.

Evaluation of diuretic activity of ethanolic extract of *Tagetes erecta* flower in albino rats.

Divya Jyothi T*, Deepak Kumar

Department of Pharmcognosy, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist., A.P, India.

Email: divyajyothi705@gmail.com

OPCG02

ABSTRACT

Objective: The objective of the current research study was to evaluate the diuretic activity of ethanolic flower extract of *Tagetes erecta* in albino rats.

Material & Methods: The diuretic activity of *Tagetes erecta* flower extract was evaluated by Lipschitch test model in albino rats. Animal models were divided into 4 types. Group-1 received normal saline (25ml/kg b.wt., p.o). Group-2 received Ethanolic flower extract (100mg/kg b.wt., p.o.), Group-3 received Ethanolic flower extract (200mg/kg b.wt., p.o.), Group-4 received standard drug furosemide (10 mg/Kg b.wt., p.o.)

Results: The Plant extract at a dose of 200mg/kg p.o. showed potent diuretic effect with increase in electrolyte concentration in urine, increase levels of sodium, potassium and chloride ions, when compared with standard drug and the extract at a dose of 100mg/kg p.o.in Albino rats.

Conclusion: From present study it has concluded that the Ethanolic flower extract of *Tagetes erecta* had shown dose dependent diuretic effect, which may be because of presence of various chemical constituents like alkaloids, glycosides etc.

Keywords: *Tagetes erecta*, Flower, Diuretic activity, Furosemide, Electrolyte concentration.

Review on medicinal plants with potential antimicrobial activity

Chaithanya K*, **Deepak Kumar**

Department of Pharmcognosy, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist., A.P, India.

Email: k.chaithanya059@gmail.com

OPCG03

ABSTRACT

In recent times, there have been increases in antibiotic resistant strains of clinically important pathogens, which have led to the emergence of new bacterial strains that are multi-resistant. The non-availability and high cost of new generation antibiotics with limited effective span have resulted in increase in morbidity and mortality. Therefore, there is a need to look for substances from other sources with proven antimicrobial activity. Consequently, this has led to the search for more effective antimicrobial agents among materials of plant origin, with the aim of discovering potentially useful active ingredients that can serve as source and template for the synthesis of new antimicrobial drugs. Several medicinal plants have been used as antimicrobial activity.

Keywords: Antimicrobial drugs, Antibiotic, Important pathogens, Medicinal plants.

Green tea constituents and its negative effects - A review

Lokanadham P*, Divya Jyothi T, Deepak Kumar

Department of Pharmcognosy, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist., A.P, India.

Email: lokanadhampammi7@gmail.com

OPCG04

ABSTRACT

Tea is one of the most popular beverages, which are commonly used all over the world. Tea is mostly used in countries such as China and Japan. The consumption of green tea about 20% of world-wide. Today the green tea is cultivated commercially in Asia, Africa and South America. Green tea is obtained from *Camellia sinensis*, belongs to the family theaceae. Although there are beneficial effects of green tea but it has also have a side effects. We have reviewed different research articles and found that by consuming a large amount of green tea cause nausea, vomiting, dehydration, lethargy, central nervous system stimulation such as dizziness, insomnia, tremors, restlessness, confusion, dieresis, heart rate irregularities and psychomotor agitation may occur. If consumption of more than five cups of Green tea per day resultant most side effects are due to high consumption of caffeine. Epigallocatechin-3-gallate (EGCG) has anti-folate activity so as to prevent folate deficiency it should not use in excessive quantity and it may reacts with some drugs like aspirin and MAOI.

Keywords: Green tea, Side effects, caffeine, *Camellia sinensis*, Theaceae.

The nature's gift for diabetic patients *Costus igneus* (insulin plant)

OPCG05

Anusha Krishna N[*1], Ramesh D[2]

[1]*IV Year B. Pharmacy, Ratnam institute of Pharmacy, Pidathapolur-524346, Nellore, A.P, India.*
[2]*Associate Professor, Department of Pharmaceutical Chemistry, Ratnam institute of Pharmacy, Pidathapolur-524346, Nellore, A.P, India.*
E-mail: dhaniramesh1@gmail.com

ABSTRACT

Since long back herbal medicines have been the highly esteemed source of medicine therefore, they have become a growing part of modern, high-tech medicine. Plants have been a good source of medicine for the treatment of various type of disease, still many plants and active compounds obtained from plants have not been well characterized. More investigations must be carried out to evaluate the exact mechanism of action of the plants with antidiabetic and insulino mimetic activity. It is always believed that plant is safe, but so many plant materials are not safe for the human being, that's why toxicity study of the plants should also be elucidated before consumption of these plant materials. *Costus igneus*, Insulin plant is a medicinal plant and capable of having Magic Cure for Diabetes. Leaf of this herbal plant helps to build up insulin by strengthening β-cells of pancreas in the human body thus popularly known as "Insulin plant" in India. In view of the above aspects the present review provides profiles of this plant with hypoglycemic properties, available through literature source from various databases with proper categorization according to the parts used, mode of reduction in blood glucose (insulinomimetic or insulin secretagogues activity) and active phytoconstituents having insulin mimetics activity. The review describes some new bioactive drugs and isolated compounds from plants. Thus, from the review majorly, the antidiabetic activity of studied medicinal plant is attributed to the presence of polyphenols, flavonoids, terpenoids, coumarins and other constituents which show reduction in blood glucose levels. The review also dileneates the management aspect of diabetes mellitus using this plant and their its principles. Diabetes is the most common metabolic disorder now a days and this review explains the total anti-diabetic activity of the plant *Costus igneus* (insulin plant).

Keywords: Phytoconstituents, Blood glucose, Insulin, β-cell, Antidiabetic activity.

Herbal remedy for obesity

OPCG06

Yamini C

Ratnam Institute of Pharmacy, Pidathapolur, Muthukur (M), Nellore-524346, Andhra Pradesh, India.

Email: chembetiyaminiyadav000@gmail.com

ABSTRACT

We describe the epidemic of obesity in the United States: escalating rates of obesity in both adults and children, and why these qualify as an epidemic; disparities in overweight and obesity by race/ethnicity and sex, and the staggering health and economic consequences of obesity. Physical activity contributes to the epidemic as explained by new patterns of physical activity in adults and children. Changing patterns of food consumption, such as rising carbohydrate intake- particularly in the form of soda and other foods containing high fructose corn syrup-also contribute to obesity. We present as a central concept, the food environment-the contexts within which food choices are made-and its contribution to food consumption:

the abundance and ubiquity of certain types of foods over others; limited food choices available in certain settings, such as schools; the market economy of the United States that exposes individuals to many marketing/advertising strategies. Advertising tailored to children plays an important role.

Key words: Obesity, Food consumption, Overweight, High fructose.

Aloevera: A herbal medicine for Rheumatoid arthritis

Divya G

OPCG07

Ratnam Institute of Pharmacy, Pidathapolur, Muthukur (M), Nellore-524346, Andhra Pradesh, India.

Email: guntamadugu.divya@gmail.com

ABSTRACT

Early diagnosis and effective treatment is considered to be important in the prevention of joint damage and disability in patients with rheumatoid arthritis (RA). This hypothesis has led to the establishment of special early arthritis clinics in many centers. The lag times between onset of symptoms of RA and diagnosis, and the introduction of disease modifying anti-rheumatic drugs, have been greatly reduced. Treatment strategies have become increasingly refined. Moreover, newer therapies have increased the options for limiting early joint damage and subsequent disability.

Key words: Rheumatoid arthritis, Joint damage, Newer therapies, anti-rheumatic drugs.

MicroRNA in Cancer: A review

OPCO01

Krishna Pavani K

Department of Pharmaceutics, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist., A.P., India.

Email: krishnasharma0231995@gmail.com

ABSTRACT

MicroRNAs (miRNAs) are a recently discovered family of short non-coding RNA molecules of about 19-24 nucleotides in length that are involved in regulation of gene expression. Since the identification of microRNAs (miRNAs) in 1993, and the subsequent discovery of their highly conserved nature in 2000, more importantly, beyond their roles in physiological processes, many miRNAs are aberrantly expressed in various pathologies including cancer and regulate tumor- and metastasis-associated genes. Their pivotal role in metastasis has emerged only recently. MicroRNAs (miRNAs) are a class of small noncoding RNA molecules that regulate gene expression by Watson-Crick base pairing to target messenger RNA (mRNA). This approach proved successful in identifying the validated cancer miRNAs for 11 common human cancers with area under ROC curve (AUC) ranging from 71.15% to 96.36%. Since the identification of microRNAs (miRNAs) in 1993, and the subsequent discovery of their highly conserved nature in 2000, MicroRNAs (miRNAs) are small non-coding regions in RNAs of 20–22 nucleotides, which play an important role in all biological pathways in multicellular organisms including mammals. Therefore, miRNAs fingerprinting represents a new addition to the tools to be used by medical oncologists. In the present review we had concentrated on the role of miRNAs in carcinogenesis/cancer.

Keywords: MicroRNAs, Noncoding, Messenger RNA, Fingerprinting, Cancer.

A review on Newcastle disease

OPCO02

Munisekhar B*, Premalatha S

Department of Pharmacology, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist., A.P., India.

Email: balumunisekharreddy@gmail.com

ABSTRACT

Newcastle disease is a contagious viral disease of birds and considered one of the most important poultry diseases world- wide. The disease can vary from mild to severe. Highly contagious and severe form of the disease is called Exotic Newcastle Disease. Both domestic and wild birds can be affected by Newcastle disease Eg: Turkeys, Ducks, Geese, Parrots, Pigeons. Newcastle Disease affects the respiratory, nervous, and digestive systems of birds. The incubation period ranges from 2 to 15 days. An infected bird suffers from major symptoms including Respiratory: sneezing, gasping for air, nasal discharge, coughing, Digestive: greenish, watery diarrhoea Nervous: depression, muscular tremors, drooping wings ,twisting of head and neck, circling, complete paralysis, Reduction in or complete loss of egg production..No treatment available till now. Direct contact with feces, respiratory secretions and Indirect contact with feed, water, equipment causes mild conjunctivitis in humans. No human-to-human spread. Mild conjunctivitis is prevented by use of bird-proofing houses and proper carcass disposal.

Keywords: Newcastle disease, Mild conjunctivitis, Diarrhoea.

Antibiotics: The race against drug resistance

OPCO03

Chamanthi T*, Varalakshmi J

Department of Biotechnology, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist., A.P., India.

Email: chamanthi.t006@gmail.com

ABSTRACT

Antimicrobial therapy takes advantage of the biochemical differences that exists between microorganisms and human beings. Man has not survived without the use of antibiotics. Hardly after the discovery and use of first antibiotics made of microorganisms that still survived the effect of antimicrobial agents. Drug resistance hastened by rapid increase in drug access, in appropriate or sub optimal use of drugs around the world. Drivers of the drug resistance are appropriate drug use weak health system, Poor drug quantity, counterfeiting and excess use of antibiotic in agriculture, technological gaps. Surveillance must be improved by collecting and sharing information across networks of laboratories. Public and private sectors must work together to secure the entire drug supply chain. The research starts race against the drug resistance includes the health and economic consequences. Hence this helps the microorganisms devoid of drug resistance.

Keywords: Drug resistance, anti microbial, Microorganisms, Appropriate drug

Future techniques to treat diabetes - Stem cell treatment

Swetha G

OPCO04

Departmet of Pharmacology, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist., A.P., India.

Email: swethareddysweety97@gmail.com

ABSTRACT

Stem cell therapy has become a tantalizing idea to provide glucose-responsive insulin-producing cells to Type 1 diabetic patients as an alternative to islet transplantation. Multiple groups have developed varied approaches to create a population of cells with the appropriate characteristics. Both adult and embryonic stem cells have received an enormous amount of attention as possible sources of insulin-producing cells. Although adult stem cells lack the pluripotent nature of their embryonic counterparts, they appear to avoid the ethical debate that has centred around the latter. This may limit the eventual application of embryonic stem cells, which have already shown promise in early mouse models. One must also consider the potential of stem cells to form teratomas, a complication which would prove devastating in an immunologically compromised transplant recipient. The present review looks at the progress to date in both the adult and embryonic stem cells fields as potential treatments for diabetes.

Keywords: β-cell, pancreatic islet, progenitor cell, stem cell, transplantation, Type 1 diabetes

Recent developments and future directions in dengue vaccines

Sruthi K

OPCO05

Department of Pharmacology, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist., A.P., India.

E-mail: sruthi23@gmail.com

ABSTRACT

Dengue is a mosquito-borne disease which is currently an expanding global health problem. The disease is caused by four closely related viruses. There is no specific medication and prevention is currently limited to vector control measures. The uniqueness of the dengue viruses and the spectrum of disease resulting from infection have made dengue vaccine development difficult. Several vaccine candidates currently being evaluated in clinical studies. Despite more than 70 years of effort, a safe and effective tetravalent dengue vaccine would therefore represent a major advance in the control of the disease and is considered a high public health priority. While a licensed dengue vaccine is not yet available, the scope and intensity of dengue vaccine development has increased dramatically in the last decade.

Key words: Dengue fever, vaccine, Dengue virus.

Increase in TTP Protein protects against inflammatory diseases

OPCO06

Jyothsna C

Department of Pharmacology, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist., A.P., India.

Email: chakralajyothsna@gmail.com

ABSTRACT

Tristetraprolin (TTP) is the protein that binds to the TNF-α& GM-CSF and arrests the production of the above said inflammatory mediators. Recent studies revealed that the mouse model had significant inflammation at the foot joint having Rheumatoid arthritis,while the TTP gene expressed mouse model showed higher than normal amounts of the TTP protein with significantly reduced the inflammation at the foot joint .These studies also revealed that the higher levels of TTP protein were providing more resistance to certain damaging inflammatory diseases including Rheumatoid arthritis ,Psoriasis, and Multiple sclerosis. These findings may eventually result in an oral medicine for the treatment of these inflammatory diseases in humans. This article will provide a deep insight into the action of TTP protein against the inflammatory diseases by dampening the excessive production of Pro inflammatory mediators and its mechanism.

Key words: TTP (Tristetraprolin), TNF-α (Tissue necrosis factor), GM-CSF (Granulocyte macrophages colony stimulating factor).

New era of lipid-lowering drugs

OPCO07

Glory Florence M

Department of Pharmacology, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist., A.P., India.

Email: mgloryf@gmail.com

ABSTRACT

There are several established lipid-modifying agents, including statins, fibrates, niacin, and ezetimibe, that have been shown in randomized clinical outcome trials to reduce the risk of having an atherosclerotic cardiovascular event. However, in many people, the risk of having an event remains unacceptably high despite treatment with these established agents. This has stimulated the search for new therapies designed to reduce residual cardiovascular risk. New approaches that target atherogenic lipoproteins include: 1) inhibition of proprotein convertase subtilisin/kexin type 9 to increase removal of atherogenic lipoproteins from plasma; 2) inhibition of the synthesis of apolipoprotein (apo) B, the main protein component of atherogenic lipoproteins; 3) inhibition of microsomal triglyceride transfer protein to block the formation of atherogenic lipoproteins; 4) inhibition of adenosine triphosphate citrate lyase to inhibit the synthesis of cholesterol; 5) inhibition of the synthesis of lipoprotein(a), a factor known to cause atherosclerosis; 6) inhibition of apoC-III to reduce triglyceride-rich lipoproteins and to enhance high-density lipoprotein (HDL) functionality; and 7) inhibition of cholesteryl ester transfer protein, which not only reduces the concentration of atherogenic lipoproteins but also increases the level and function of the potentially antiatherogenic HDL fraction. Other new therapies that specifically target HDLs include infusions of reconstituted HDLs, HDL delipidation, and infusions of apo A-I mimetic peptides that mimic some of the

functions of HDLs. This review describes the inhibition of microsomal triglyceride transfer protein to block the formation of atherogenic lipoproteins

Key words: atherogenic lipoproteins, Apo lipoprotein, HDL, High-density lipoprotein

Evaluation of antiulcer activity of *Acacia fernisiana (l.)*Bark in rats

OPCO08

Chand Basha S*[1], Nirmala Devi B[2], Madhu M, Pradeep Kumar Y[1], Gopinath C[1]

Department of Pharmaceutical Chemistry, Annamacharya College of Pharmacy, Rajampet -516126, Kadapa, A.P., India.
Department of Pharmacognosy, Annamacharya College of Pharmacy, Rajampet -516126, Kadapa, A.P., India.
E-Mail: schandbasha20@gmail.com

ABSTRACT

Ethanolic extract of *Acacia fernisiana* was evaluated for its antiulcer activity against pyloric ligation induced ulcer in Wister rats. The ethanolic extract of *Acacia fernisiana* at the dose rate 400mg/kg an 200 mg/kg per orally exhibited significant protection against pyloric ligation induced gastric ulceration .The present investigation revealed that *Acacia fernisiana* exhibited significant antiulcer activity by enhancing potential of gastric mucosa thereby reducing mucosal damage.

Keywords: Antiulcer activity, Herbal Drug, Pyloric ligation induced gastric ulceration.

In-vivo antioxidant activity of different fractions of *Michelia nilagirica* against paracetamol induced toxicity in rats

OPCO09

Aminabee SK*, Lakshmana Rao A, Chinna Eswaraiah M

Department of Pharmacology, V.V. Institute of Pharmaceutical Sciences, Gudlavalleru-521356, A.P., India.

E-mail: aminammi786@gmail.com

ABSTRACT

Objective: To evaluate the *in-vivo* antioxidant potential of ethanolic extract of whole plant of *Michelia nilagirica* against paracetamol induced toxicity in rats.
Methods: Animals were treated with ethanolic plant extract for 7 days and the toxicity was induced with a single dose of paracetamol intraperitoneal injection. Pre-treatment with 70 mg/kg p.o of ethanolic extract of whole plant of *Michelia nilagirica* improved the SOD, catalase, peroxidase and glutathione levels significantly as compared to control group.
Results: The present study revealed that *Michelia nilagirica* has significant *in-vivo* antioxidant activity and can be used to protect tissue from oxidative stress. The results showed that the activities of SOD, catalase, peroxidase and glutathione in group treated with paracetamol, declined significantly than that of normal group.
Conclusion: Ethanolic extract of whole plant of *Michelia nilagirica* in the dose of 60 mg/kg, p.o. has improved the SOD, catalase, peroxidase and glutathione levels significantly. Based on this study we conclude that ethanolic extract of whole plant of *Michelia nilagirica* possesses *in-vivo* antioxidant activity and can be employed in protecting tissue from oxidative stress.

Keywords: *Michelia nilagirica,* Paracetamol, Sylimarin, Radical scavenging.

Effect of ethanolic seed extract of *Bauhinia purpurea* linn on cognition in scopolamine induced Alzheimer's disease rats model

Prudhvi raj M*, Afsar SK

OPCO10

Department of Pharmacology, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist, A.P., India.

E-mail: mkunniraj13@gmail.com

ABSTRACT

Aim: The present study was taken to investigate the effect of Ethanolic Seed extract of *Bauhinia purpurea* Linn (ESEBP) in Scopolamine induced Alzheimer's disease rat model.

Materials and methods: The ESEBP was administered orally at two doses (200 and 400mg/kg) for a period of 14 successive days followed by Scopolamine (1 mg/kg, *i.p*) was administered after 30 min of last dose (on day 14). Rivastigmine (1.5mg/kg) was used as standard drug. Cognitive functions are estimated by using elevated plus maze (EPM), Y-maze, and Rota rod apparatus.

Results: ESEBP extract has shown a significant memory enhancing activity at the selected doses by decrease in the transfer latency in EPM, significant increase in the percentage of spontaneous alteration on acquisition of the short term memory of the scopolamine treated rats within Y-maze task and there was absolute cognitive learning improvement is related to central cognitive mechanism's not the motor coordination paradigms by Rot rod test.

Conclusion: In the present study ESEBP may prove to be a useful medicine on account of its, memory improving property, and it would be worthwhile to explore the potential of this plant in the management of Alzheimer patients.

Key words: Alzheimer's diseases, memory enhancing, Scopolamine.

A review on Cogans syndrome

OPCO11

Lavanya P*, Devi K, Pavan Kumar B

Department of Pharmacology, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist, A.P., India.

Email: lavanyapinniboina25@gmail.com

ABSTRACT

The aim of this review article is to provide knowledge about aetiopathogenesis of cogan's syndrome, including infection hypothesis, immunologic theory and its treatment. Cogan syndrome is a rare autoimmune disease characterised by the presence of interstitial keratitis. The ocular signs includes ocular redness, ocular pain, tenonitis, exophthalamus, and interstitial keratitis etc. The etiology and pathogenesis of cogans syndrome are unknown initially the disease was thought to be caused by an infection, however cogans syndrome is currently believed to be an autoimmune disorder. Immunological tests can help to establish the diagnosis and prognosis for recovery of hearing. Topical ocular corticosteroids usually control intestitial keratitis and corticosteroids must be administered as early as possible to render the hearing loss reversible .The diagnosis of the syndrome in the early stages is important for appropriate therapy and prevention of impairment and permanant visual damage.

Keywords: Cogan syndrome, autoimmune disease, ocular pain, exophthalamus, corticosteroids.

Vaccines to fight againts diabetes: A future challenge

OPCO12

Jyothi V*, Varalakshmi J, Premalatha S

Department of Pharmacology, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist, A.P., India

E-mail: jyothireddy444@gmail.com

ABSTRACT

Diabetes is a metabolic disorder where human body does not produce or properly uses insulin. Nearly 40 million Indians are already caught with diabetes, and is expected to be 70 million by the year 2025. This diabetes information hub mainly projects the necessary steps and precautions to control & eradicate diabetes completely. Diabetes mellitus is mainly of two types, Type-1& Type-2. Though major drug treatments are available, it is not curable till now and the therapy for it is more troublesome including insulin administration. But the recent trend in the treatment of diabetes has evolved in the form of vaccine. The prospect of a vaccine against Type-1 diabetes is autoimmune disease that affects 0.3% on average. It results in destruction of Beta-cells due to aggressive nature of cells present in the body**.** Scientists have identified key events that lead to destruction of insulin producing cells in the pancreas by the body's own immune defenses. The T-LYMPHOCYTES present in the body are responsible for the destruction of the pancreatic cells. By the administration of VACCINES we can tolerate our body's immune system to such antigens and can easily overcome the problem and risk associated with diabetes. Thus the invention of vaccine is looking promising in the treatment of diabetes.

Key words; diabetes mellitus, vaccine, T-lymphocytes, Beta-cells, Pancreatic cells.

Current status of Ebola virus

OPCO13

Gulshan SK*[1], Ramesh D[2]

[1]III Year B. Pharmacy, Ratnam institute of Pharmacy, Pidathapolur-524346, Nellore, A.P, India.

[2]Associate Professor, Department of Pharmaceutical Chemistry, Ratnam institute of Pharmacy, Pidathapolur-524346, Nellore, A.P, India.

E-mail: dhaniramesh1@gmail.com

ABSTRACT

Ebola is a rare but deadly virus that causes bleeding inside and outside the body. As the virus spreads through the body, it damages the immune system and organs. It transmitted by animals and humans. Control of out breaks requires through coordinating with medical services. The disease has a high risk of death. Killing between 25 and 90 percent of those infected with an average of about 50 percent. The virus begins its attack by attaching to host receptors through the glycoprotein [GP] surface peplomers and is endocytosed into macropinosomes in the host cell and it penetration in to the cell. We can identify the symptom in patients includes vomiting, diarrhoea, rash, symptoms of impaired kidney and liver function, and in some cases, both internal and external bleedings. It is diagnosed through nucleic acid test. The complications of virus include multiple organ failure, severe bleeding, yellow colour discolouration of eyes, skin, seizures, and coma. Many more research companies in various countries are conducting vaccine trials. Recently 14 January 2016 Liberia WHO declares the end of the most recent outbreak of Ebola virus disease in Liberia and says all known chains of transmission have been stopped in West Africa.

Keywords: Ebola Virus, Macropinosomes, Peplomers, West Africa

A review on current options for diagnosis and treatment of Periampullary Carcinoma

OPCO14

[1]Juhith Sai G[*], [2]Ramesh D

[1]*I Year B.Pharmacy, Ratnam institute of Pharmacy, Pidathapolur-524346, Nellore, A.P, India.*
[2]*Associate Professor, Department of Pharmaceutical Chemistry, Ratnam institute of Pharmacy, Pidathapolur-524346, Nellore, A.P, India.*

E-mail: juhithsai.gadepalli@gmail.com

ABSTRACT

Periampullary cancers constitute a distinct entity compared to the classical pancreatic head cancer. Their diagnosis and the approach to their treatment have improved considerably in the last two decades. This term should be distinguished from *ampullary carcinoma* as a tumor topographically centered in the region of the ampulla of Vater, which is formed by three anatomical components: the ampulla (common channel), the intraduodenal portion of the bile duct and the intraduodenal portion of the pancreatic duct. Thus, it may show intestinal and pancreatobiliary morphologyEndoscopy, high-resolution imaging, and endosonography have resulted in improved diagnosis and staging. A Pancreatoduodenectomy (Whipple Procedure) offers the only chance of cure and improves survival. Superior results are seen with high volume centers. While endoscopy plays an invaluable role in the palliation of obstructive jaundice in unresectable lesions, its role in preoperative stenting remains uncertain. Adjuvant treatment modalities have so far failed to significantly improve survival. These tumors carry a better prognosis than the more dismal pancreatic head cancer, possibly because of the activation of different molecular pathways in the process of carcinogenesis.This article reviews the current understanding and various treatment options of Periampullary Carcinomas other than the classical pancreatic head cancer.

Keywords: Periampullary carcinoma, ampulla of vater, endosonography, jaundice, stenting, panceatoduodenectomy.

A review on Alzheimer's disease and possible ways of reducing its impact

OPCO15

[1]Gopala Krishna Varshith R[*], [2]Ramesh D

[1]*I Year B.Pharmacy, Ratnam institute of Pharmacy, Pidathapolur-524346, Nellore, A.P, India.*
[2]*Associate Professor, Department of Pharmaceutical Chemistry, Ratnam institute of Pharmacy, Pidathapolur-524346, Nellore, A.P, India.*

Email: varshithgopalakrishna@gmail.com

ABSTRACT

Alzheimer's disease (AD), also known as Alzheimer disease, is the most common form of dementia. It is diagnosed in people over 65 years of age. Although the less-prevalent early-onset Alzheimer's can occur in much younger people. Alzheimer's disease is classified as a neurodegenerative disorder, the cause and progression of which are poorly understood. The disease process appears, to be associated with plaques and tangles in the brain. The presence of characteristic neurological and neuropsychological features and the absence of alternative conditions are supportive.

Advanced medical imaging with computed tomography (CT) or magnetic resonance imaging (MRI), and with single-photon emission computed tomography (SPECT) or positron emission tomography (PET) can be used to help exclude other cerebral pathology or subtypes of dementia. Moreover, it may predict conversion from prodromal stages (mild cognitive impairment) to Alzheimer's disease. It may be made to have less effect on health using coconut oil and other food sources. Extra virgin Olive-oil, Coconut- oil contains oleocanthal that helps boost the production of key proteins and enzymes that help break down the amyloidal plaques associated with Alzheimer's disease. Modern techniques are also on

research to attribute to AD which also include using a pace-maker for brain, Transhumanism, brain uploading for the reduction of impact of AD. This review presents updated information gathered on scientifically possible ways of reducing impact of Alzheimer disease.

Key words: Alzheimer's disease, Oleocanthal-olive-oil, Coconut-oil, Brain pace maker, Transhumanism, Brain-uploading.

A Review on Rheumatoid Arthritis in Health Care Practice

[1]Shabana SD[*], [2]Ramesh D

[1]III Year B.Pharmacy, Ratnam institute of Pharmacy, Pidathapolur-524346, Nellore, A.P, India.

[2]Associate Professor, Department of Pharmaceutical Chemistry, Ratnam institute of Pharmacy, Pidathapolur-524346, Nellore, A.P, India.

E-mail: dhaniramesh1@gmail.com

OPCO16

ABSTRACT

It is a chronic inflammatory disorder of joints affects the diarthrial joints and especially in the fingers, wrists, feet, and ankles. It is known as auto immune disorder because it affects the immune system. The disease affects fourth and sixth decade of the life. The genetics, infections, vitamin-D deficiency in the bones, smoking has a significant role in progeression of the disease. It is a systemic disorder affects the body. The B cells, T cells MHC cells activated when the immune system is dysregulated. The symptoms include morning stiffness, rumatoid nodules formation, systemic arthritis, pain in the fingers, wrists, feet, and ankle sextra articular lesions formation cardiomyopathy, bone marrow depression, pleural effusion. The diagnosis of the disease includes the presence of rumatoid factor in the blood. Elevated Erythrocyte sedimentation rate, C reactive proteins rate. Blood test, X rays of hand reveals the disease progression. The management of disease includes disease modifying Anti Rumatoid Drugs, Interlukin antagonist, anti TNF agents, Non steroidal anti inflammatory drugs.

Key words: Arthritis, Disease, Genetics, Immune system.

Microwave assisted high speed chemistry

OPCH01

Lakshmi V*, Soujanya M

Department of Pharmaceutical Chemistry, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist., A.P., India.

Email: maha0241994@gmail.com

ABSTRACT

In this new era both lead identification and lead optimization process there is a need for new organic small molecule. Traditional methods of organic synthesis are too slow to satisfy demand for these compounds. The fields of combinatorial and automated medicinal chemistry have been developed to meet the increasing requirement of new compounds for drug discovery. Due to the efficiency of microwave flash heated chemistry dramatically reducing the reaction time from days to seconds, has recently been proven in several different field of organic chemistry. We believe that the time saved by using focused microwaves is potentially important in traditional organic synthesis but could be of even greater importance in high speed combinatorial and medicinal chemistry.

Key words: Microwave, High speed chemistry, medicinal chemistry.

Hydrazones: as a lead molecule for Tuberculosis therapy

Venkatesh B*, Soujanya M

Department of Pharmaceutical Chemistry, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist., A.P., India.

Email: venkysachin7@gmail.com

OPCH02

ABSTRACT

Tuberculosis (TB) remains health problem of enormous dimensions throughout the world and it has been account for approximately 5500 deaths every day. Even through TB is 100% curable using first line drug but drug resistance easily develops due to poor adherence to treatment, lack of adequate supervision, interruption of chemotherapy due to side effects; to the reason these is a need to introduce new drug molecule lack of negative draw backs. Hydrazones are the molecules have possessing Azometine proton responsible for broad range of activities from antimicrobial, anti mycobacterial to anti cancer activities. These observations promotes the scientist to synthesize the new molecule have the anti tubercular activity. In the present paper we focused on the different hydrazones molecules have anti tubercular activity with lesser side effects.

Key words: Mycobacterium, Azometine, Hydrazones

Synthesis, characterization and evaluation of antimicrobial and anti inflammatory activities of some novel Chalcones analogues

Vinoth Kumar. S*, Dr. R. Senthil Kumar, C. Jothi Manivannan, Dr.S. Ananda Thangadurai

Department of Pharmaceutical Chemistry, Swamy Vivekanandha College of Pharmacy, Elayampalayam, Tiruchengode- 637205, Namakkal (Dt), Tamilnadu, India.

E.mail: vinogkcp@gmail.com

OPCH03

ABSTRACT

Chalcone, an important intermediate of flavonoid synthetic pathway, has been shown to exhibit diverse biological and pharmacological activities such as anti- cancer, antioxidant, anti- inflammatory etc. Chalcones are the compounds where aromatic substituents are introduced at the terminal position of the system-C=C-C=O. So, Chalcones are characterized by their position of an Ar (A)-CO-CH=CH-Ar (B)-in which two aromatic rings A and B are linked by an aliphatic three carbon chain. Chemically they consist of open-chain flavanoid in which the two aromatic rings are joined by a three-carbon α, β-unsaturated carbonyl system. Chalcones are the precursors in the biosynthesis of anthocyanins and flavones. Hence Chalcones are prepared by using different aldehydes and NSAID's furthermore characterized by TLC, IR, ^{1}H NMR, & MASS spectrometry. Results of biological activities along with pa and pi predicted by PASS that most probable activities are Anti-inflammatory, Antiallergic, Anti microbial and Antiasthmatic**.** All the compounds were evaluated for antimicrobial and anti-inflammatory activity. The compounds IV b_1 & IV b_2 shown equivalent activity resembling that of standard. Remaining compounds has shown mild to moderate activities.

Keywords: Chalcones, Flavanoid, NSAID's, Anti-inflammatory activity.

Microwave assisted synthesis and anti bacterial activity of substituted Azetedinone derivatives

OPCH04

Pradeep Kumar Y*, Chand Basha S, Gopinath C

Department of Pharmaceutical Chemistry, Annamacharya college of Pharmacy, New Boyanapalli, Rajampet - 516126, Y.S.R. Dist, A.P., India.

E-Mail: y.pradeepkuamr36@gmail.com

ABSTRACT

Non classical, High-speed, environmentally benign synthesis with microwaves has attracted researchers for organic synthesis was a considerable amount of attention in recent years. An expeditious one pot microwave irradiation method for preparation of 2-azetidinones is developed. This method has been assessed as greener methodology. In our present study, A series of six novel 2-azetidinones were synthesized, compounds were identified by melting point and thin layer chromatography , functional groups of synthesized compounds were confirmed by IR spectroscopy, compounds were evaluated for their antimicrobial activities. The activities were due to cyclic carbonyl group in 2-azetidinones. Some of the compounds have shown comparative antimicrobial activities against all the microbial strains.

Key words: 2-Azetedinones, Antibacterial activity, Microwaves.

Micro greens – A review

OPCH05

RajeshBabu K*, ChandBasha S, Madhu M, Pradeep Kumar Y

Department of Pharmaceutical Chemistry, Annamacharya college of Pharmacy, New Boyanapalli, Rajampet - 516126, Y.S.R. Dist, A.P., India.

E-Mail: rajeshbabukomaragiri@gmail.com

ABSTRACT

Micro greens are a tiny form of young edible greens produced from vegetable, herb or other plants. They range in size from 1″ to 1 ½” long, including the stem and leaves. A Micro green has a single central stem which has been cut just above the soil line during harvesting. The seeds used to grow Micro greens are the same seeds that are used for full sized herbs, vegetables and greens. Micro greens are simply seedlings that are harvested before they develop into larger plants. The average crop-time for most micro greens is 10–14 days from seeding to harvest. Micro greens may potentially have higher levels of nutrients than mature vegetables. Researchers at the USDA Agricultural Research Service have published, as of early 2014, several studies that identify the nutritional make-up and the shelf life of micro greens. Twenty-five varieties were tested, key nutrients measured were ascorbic acid (vitamin C), tocopherols (vitamin E), phylloquinone (vitamin K), and beta-carotene (a vitamin A precursor), plus other related carotenoids in the cotyledons. Intensely colored micro greens are considered more nutritious than lighter ones. Commonly grown varieties of micro greens include: Amaranth, Arugula, Beets, Basil, Cabbage, Celery, Chard, Chervil, Cilantro, Cress, Fennel, Kale, Mustard, Parsley, Radish, and Sorrel.

Key words: Edible Greens, Herbs, Carotenoids.

Green Chemistry

Eswari T*, Soujanya M

Department of Pharmaceutical Chemistry, Gokula Krishna College of Pharmacy, Sullurpet- 524121, Nellore Dist., A.P, India.

E-mail: eswarit013@gmail.com

OPCH06

ABSTRACT

Green Chemistry is defined as environmentally benign chemistry. The synthetic schemes are designed in such a way that there is least pollution to the environment. As today, maximum pollution to the environment is caused by numerous chemical industries. The cost involved in the disposal of the waste product is also enormous. Therefore, attempts have been made to design synthesis for manufacturing processes in such a way that the waste products are minimum they have no effect on the environment and their disposal is convenient. It aims to reduce or even eliminates the production of any harmful bi-products and maximizing the desired product without compromising with the environment. The three key developments in green chemistry include use of super critical carbondioxide as green solvent, aqueous hydrogen peroxide as an oxidizing agent and use of hydrogen in asymmetric synthesis. If possible, it is best to carry out reactions in be aqueous phase. With this view in mind, synthesis methods should be designed in such a way that the starting materials are consumed to the minimum extent in the final product. The reaction should also not generate any toxic bi-product. The developments approaches in green chemistry are phase-transfer catalyst in green synthesis, microwave induced synthesis, ultra sound assisted green synthesis, using biocatalysts, and solid phase technique in organic synthesis.

Key Words: Green chemistry, microwave assisted synthesis, solid phase synthesis.

Phytosomes-a Nanotechnology approach to enhance bioavailability of Phytoconstituents

OPCE01

Sandhya Rani N[*1], Chandra Sekhar KB[2]

*[*1] Research Scholar, JNTUA, Ananthapuramu-515002, A.P, India*

[2] Director, Oil Technological & Pharmaceutical Research Institute (OTPRI), JNTUA, Ananthapuramu-515002, A.P, India.

Email: sandhyarani.nandyala@gmail.com

ABSTRACT

Phytomedicine occupies a pivotal place in the current therapeutic approaches, yet the full term potential of Phytomedicine has not been yet explored due to the poor aqueous solubility, Permeation capability, Low systemic availability, instability and extensive first pass metabolism of Phytoconstituents**.** To serve these lacunas herbalists have designed a Nanotechnology based drug product- Phytosome. Phytosome or Herbosome- a footprint approach in Nanophytomedicine is a patented technology developed by Indena to enhance the bioavailability of certain of the poorly permeable phytoconstituents. This technology employs the usage of amphipathic molecules like Phospholipids which encapsulates the poorly permeable drugs and enhance their permeability as well Bioavailability. Phytosome technology helps in altering the properties of Phytomedicine thereby rendering them more bio-active. Phytosomes are used to deliver macromolecules to intracellular sites of action. This technology has an added advantage of Phospholipid inherent bioactivity. Therefore at this outset herbalists can employ this novel technology for utilising the Phytoconstituent bioactivities at its maximum. Bioavailability of Silybin etc has been improved by employing

Phytosomal technology.The present review presents the information on the formulation technology of Phytosome, its evaluation and characterization parameters and also discusses about certain of the marketed Phytosomal Formulations.

Keywords: Nanophytomedicine, Phytosome, Herbosome, Phytomedicine, Bioavailability.

Design and evaluation of Transdermal patches of Propranolol

OPCE02

Saravanakumar K[1]*, RameshY[2]

1. Professor, Sree Vidyanikethan College of Pharmacy, A Rangampet, Tirupati-517102, Chittoor District, Andhra Pradesh, India.

2. Assistant Professor, Ratnam Institute of Pharmacy, Nellore-524356, Andhra Pradesh, India.

Email: saravanakumar156@gmail.com

ABSTRACT

The objective of the present study is to develop and characterize the membrane moderated transdermal drug delivery system. In this study, HPMC, PVP containing Propranolol patches were prepared by using solvent evaporation technique and evaluated their physico-chemical properties. The drug release through the transdermal patches of Propranolol follows first order kinetics with diffusion controlled mechanism. Effect of film forming polymers like HPMC, PVP has been checked on *in-vitro* permeation of drug and was found to be effective. The finding of this result revealed that the problems of Propranolol on oral administration like dissolution rate limited absorption and gastric side effects can be overcome by applying Propranolol topically in the form of transdermal patches.

Keywords: Moisture uptake, Half life, Kinetic models, First pass metabolism.

Liposomes - A novel strategy of intranasal delivery for targeting the brain

OPCE03

Harika V

Department of Pharmaceutics, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist., A.P., India

E-mail: harikav14@gmail.com

ABSTRACT

Drug delivery strategies must address one hand methods to bypass BBB and on the other hand methods to overcome efflux transporters. Lipid based nano carriers, liposomes solid lipid nano particles are widely investigated for brain targeting. The BBB is characterised by relatively impermeable endothelial cells with tight junctions, preventing the passage of water –soluble molecules from the blood circulation into the CNS. Intranasal delivery provides a practical, non-invasive method of bypassing the blood-brain barrier (BBB) to deliver therapeutic agents to the brain and spinal cord. This technology allows drugs that do not cross the BBB to be delivered to the central nervous system within minutes. It also directly delivers drugs that do cross the BBB to the brain, eliminating the need for systemic administration and its potential side effects. This is possible because of the unique connections that the olfactory and trigeminal nerves provide between the brain and external environment. Intranasal delivery does not necessarily require any modification to therapeutic agents. This review aims to explore the evidence for the existence of a direct nose to brain delivery route for liposomes administered to nasal cavity and transported via olfactory epithelium and directly to the CNS.

Keywords: Blood brain barrier, Intranasal delivery, Liposomes

Role of micro emulsions as Nano carrier

OPCE04

Sai Praneetha A

Department of Pharmaceutics, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist., A.P., India.

E-Mail: praneethasai16@gmail.com

ABSTRACT

Brain disorders including neurological disorders, inflammatory and infectious conditions of brain, brain cancer and brain stroke pose a significant challenge globally. The blood brain barrier (BBB) an important physiological barrier limits access of drug to the site of action. While passive diffusion and endogenous carrier mediated transport are two important mechanisms for the transport of substances across the BBB into the luminal side, efflux transporters severely limit drug concentration. Drug delivery strategies must address on one hand methods to bypass the BBB and on the other hand methods to overcome efflux transporters. Lipid based nano carriers, liposomes and solid lipid nano particles are widely investigated for brain targeting. Emulsion based lipid nano carriers like micro emulsions (ME) and nano emulsions (NE) provide an additional advantage of greater bypass of the reticulo-endothelial system with improved brain targeting. More recently the promise of ME and NE for brain delivery has been cited. Oil, surfactants and water are the primary components of ME and NE. ME may additionally comprise co surfactants. The reviews discusses the development of ME/NE, design of functional ME/NE by appropriate selection of primary ME/NE components which could provide improved brain delivery by functioning as stealth agent, absorption enhancer, efflux transporter inhibitor or even facilitate receptor mediated endocytosis. Engineering functional ME/NE into multifunctional ME/NE as a strategy to further enhance brain targeting is also presented. Functional and multifunctional excipients have been discussed. The possible routes of delivery namely intravenous, oral and intranasal and therapeutic applications of ME/NE designed for brain targeting is also reviewed.

Key words: Blood Brain Barrier, Brain targeting, Micro emulsion

Bacterial robotics used in both Medical & Biotechnological aspects

NagendraBabu R*, MallikarjunaRao K, Chand Basha S, Gopinath C

Department of Pharmaceutics, Annamacharya college of Pharmacy, New Boyanapalli, Rajampet- 516126, Y.S.R. Dist., A.P., India.

E-Mail: babu.nagendra72@gmail.com

OPCE05

ABSTRACT

Bacterial robots (BactoBot) have the potential to revolutionize many aspects of medicine. These are wirelessly controlled and powered devices. Bacterial robots can serve as a near-term goal for wireless biomedical applications, and their design will be based on the task they need to accomplish and the type of environment in which they will operate. Bacterial robotic technique is a minimally invasive technique. So, it reduces postoperative pain, hospitalization duration, patient recovery time, infection risks, and overall cost and increasing the quality of care. Miniaturization of the power source and on-board actuation is the main bottleneck for development of micro scale mobile robots. Tiny terminator robots that use their own flagella to venture deep into tumors where conventional chemotherapy can't reach. When they reach the tumors, the bacteria will deliver drugs triggering cancerous cells to kill themselves. A bacterial robot may be the appropriate vehicle to deliver the

differentiated stem cells to their desired location. Bacterial robots even be used to deliver the drugs inside the liquid environments of human body such as urinary tract, eye ball cavity, ear and cerebrospinal fluid. As Bacterial Robotics are eco-friendly these can be employed in monitoring toxic (or) pathogenic biochemical agents in the environment as well as inspection and maintenance of fluid filled pipes in space craft and nuclear plants.

Keywords*:* Bacterial Robots, Infection Risks.

Preparation and evaluation of multi-mineral [multi-min] tablets

Saritha K

OPCE06

Department of Pharmaceutics, Ratnam Institute of Pharmacy, Pidathapolur, Muthukur (M), Nellore-524346, Andhra Pradesh, India.

E-mail: sruthik45@gmail.com

ABSTRACT

Aim of this study was to prepare and evaluate multi mineral tablets containing different minerals like calcium, magnesium, zinc, other excipients with citric acid presarvable, sucrose as a sweetening agent and orange oil a a aflavaring agent the Multi mineral tablets were prepared by direct compression method. compatability studies were performed by FTIR techniques and no interaction were found between drugs and excipients used. The angle of repose values was found to be in the range 29°.28' to 33°.54' and bulk density range 0.401 to 0.423 g/ml and tapped density of powder range 0.455 to 0.488 g/ml and also weight variation, hardness (4 to 6.5kg/sqcm) and friability we within the limits. All the amount of ingredients in the formulation is selected based on daily requirements of most patients although in some situations multiple doses per day are indicated.

Keywords: citric acid, orange oil and direct compression.

Formulation and characterization of Moxifloxicin microspheres

Nagaveni P[1], Chandra Sekhar KB[2], Jayachandra Reddy P[3]

OPCE07

[1] Department of Pharmaceutics, Gokula Krishna College of Pharmacy, Sullurpet 524121, Nellore District- A.P, India.

[2] Director, JNTUA-Oil Technological Research Institute, Anantapuramu-515001, Andhra Pradesh, India.

[3] Professor & Principal, Krishna Teja Pharmacy College, Tirupati-517506, Andhra Pradesh, India.

E-mail: nagavenipatp@gmail.com

ABSTRACT

In the present study an attempt has been made to develop sustained release drug delivery systems by designing microspheres using carbopol, SCMC, sodium alginate as polymers. Micro encapsulation has been useful technique for the design of Moxifloxicin microspheres. Moxifloxicin microspheres were prepared by using emulsion solvent evaporation technique and characterize their physico-chemical properties. The entrapment efficiency ranges from 54.12% to 74.81%.*In-vitro* drug release studies were conducted for 12 hr and all formulation shows sustained action. Moxifloxicin is an ideal drug for formulating as sustained release products are most useful treatment of long term therapy. For this purpose we have used biodegradable polymers are retardant material to make the concept of sustained release drug delivery.

Keywords: Dose dumping, Half life, First order, Non-fickian, Diffusion coeffecient.

Intranasal delivery Brain Targetting

OPCE08

Dwaraka Madhuri N*, Neelima M, Ooha H

Department of Pharmaceutics, Gokula Krishna College of Pharmacy, Sullurpet 524121, Nellore District- A.P, India.

E-mail: dwarakamadhuri27@gmail.com

ABSTRACT

Nasal delivery is the logical choice for topical treatment of local diseases in the nose and Para nasal sinuses such as allergic and non-allergic rhinitis and sinusitis. The nose is also considered an attractive route for needle-free vaccination and for systemic drug delivery, especially when rapid absorption and effect are desired. In addition, nasal delivery may help address issues related to poor bioavailability, slow absorption, drug degradation, and adverse events in the gastro intestinal tract and avoids the first-pass metabolism in the liver. However, when considering nasal delivery devices and mechanisms, it is important to keep in mind that the prime purpose of the nasal airway is to protect the delicate lungs from hazardous exposures, not to serve as a delivery route for drugs and vaccines. The narrow nasal valve and the complex convoluted nasal geometry with its dynamic cyclic physiological changes provide efficient filtration and conditioning of the inspired air, enhance olfaction, and optimize gas exchange and fluid retention during exhalation. However, the potential hurdles these functional features impose on efficient nasal drug delivery are often ignored. With this background, the advantages and limitations of existing and emerging nasal delivery devices and dispersion technologies are reviewed with focus on their clinical performance. The role and limitations of the in vitro testing in the FDA guidance for nasal spray pumps and pressurized aerosols (pressurized metered-dose inhalers) with local action are present.

Key words: Nasal delivery, Pressurized aerosols, FDA guidance, Poor bioavailability.

Analytical method development and validation of Temozolomide using UV Spectrophotometer in tablet dosage form

OPAA01

Department of Pharmaceutical Analysis, Annamacharya college of Pharmacy, New Boyanapalli, Rajampet - 516126, Y.S.R. Dist, A.P., India.

E-Mail: creativemadhum@gmail.com

ABSTRACT

Temozolomide is an antineoplastic agent with activity against a broad spectrum of murine tumors. This compound is currently marketed for the treatment of patients with glioblastomamultiforme and anaplastic astrocytoma, which are serious and aggressive types of brain cancers. The present research work discusses the development and validation of a UV spectrophotometric method for Temozolomide. Simple, accurate, precise and cost efficient spectrophotometric method has been developed for the estimation of Temozolomide in bulk and capsule dosage form. The optimum conditions for the analysis of the drug were established. The maximum wavelength (λ max) was found to be 329 nm in 0.1N HCl. The percentage recovery of Temozolomide was found to be in range 98.4 - 99.92%. Beers law was obeyed in the concentration range of 2-16μg/ml. Calibration curves shows a linear relationship between the absorbance and concentration. The line equation $y = 0.055x + 0.033$ with r^2 of 0.999 was obtained. Validation was performed as ICH guidelines for Linearity,

accuracy, precision, LOD and LOQ. The proposed method may be suitable for the analysis of Temozolomide in bulk and capsule formulation for quality control purposes.

Keywords: Temozolomide, UV spectrophotometer, glioblastomamultiforme, anaplastic astrocytoma, ICH guidelines.

Bioanalytical method development and validation of Idelalisib by RP-HPLC method

OPAA02

Sharmila D*[1], Suneetha A[2]

[1]College of Pharmaceutical Sciences, Acharya Nagarjuna University, Nagarjuna Nagar, Guntur-522510, Andhra Pradesh, India.
[2] Department of Pharmaceutical Analysis, Hindu College of Pharmacy, Amaravathi road, Guntur-522 002, Andhra Pradesh, India.

E-mail: sharmiladonepudi@gmail.com

ABSTRACT

A simple, rapid, sensitive, and accurate high performance liquid chromatography was developed for determination of Idelalisib (IL) in rabbit plasma using Ibrutinib as internal standard (IS). Idelalisib is a phosphoinositide 3-kinase inhibitor indicated in the treatment of chronic lymphocytic leukemia (CLL), relapsed follicular B-cell non-Hodgkin lymphoma (FL), and relapsed small lymphocytic lymphoma (SLL). The analytes and IS were separated on a ODS (250 mm × 4.6 mm, 5 µm) column using Mobile phase composition as Buffer and Acetonitrile in the ratio of 85:15 v/v%. The total chromatographic runtime is 10.0 min with retention time for IL and IS at 7.195, and 5.435 min, respectively with a flow rate 1ml/min. The method is validated over a dynamic linear range of 0.02-4 µg/mL for IL with a correlation coefficient of r2 0.999. The method was validated as per the USFDA guidelines and the results were within the acceptance criteria for selectivity, sensitivity, linearity, precision, accuracy, recovery stability of solution, stability of solution in plasma and dilution integrity.

Keywords: Idelalisib, Ibrutinib, Anticaner, Rabbit Plasma.

Thyroid – Herbal remedies

PPCG01

Divya Sree MS

Assistant Professor, Department of Pharmacognosy, Sree Vidyanikethan College of Pharmacy, A.Rangampet – 517102, Tirupathi, A.P., India.
E-mail: divyasreems@gmail.com

ABSTRACT

The thyroid gland produces the hormone thyroxin. The thyroid is essential in protein synthesis, growth, temperature regulation, and oxygen consumption of cells. If the thyroid is depleted or deficient, the rest of the body functions poorly. With low thyroid, cholesterol can shoot up to dangerous levels. The basic herbs have the answer. The overall key is no side effects and it is effective remedy. The remedies are in sync with nature which is the biggest advantage where no other medicine can claim these facts. The use of herbal treatments is independent of any age groups. There are many simple remedies which can help to regulate the release of thyroid hormone. Irish moss and kelp are used in combination to balance hormonal deficiency. Black walnut has a high content of iodine and is a thyroid stimulant. Ginseng strengthens the body. This review explains about different herbs used for the regulation of thyroid hormone release.

Key Words: Thyroid, Herbal remedies, Hormone.

A review on *Marsilea quadrifolia* l. – A medicinally important plant

Sangameswaran B[2], Mohanraj S[*1]

PPCG02

[1]Research Scholar, TNMGRMU, Chennai – 600 032, Tamilnadu, India
Professor & Principal, SSM College of Pharmacy, Chinniampalayam, Jambai -638 312, Tamilnadu, India
E-mail: mohanmani_50@yahoo.com

ABSTRACT

Marsilea quadrifolia Linn is an aquatic fern belongs to the family (Marsileaceae). All parts of the plant, possess a multitude of phytochemical secondary metabolite which impart an exceptional assortment of medicinal uses to the plant. Its use has been exposed as Antibacterial, Antioxidant, Neurodegenerative disorders, Anticonvulsive, Anti – cholinesterase etc. Several extracts like aqueous, Chloroform, Ethanol, Methanol and Petroleum ether has been used for different Pharmaceutical activities.

Key words: Marsileaceae, Petroleum ether, Phytochemical & *Marsilea quadrifolia*

Home remedies for the treatment of various diseases a-review

Sameera banu MD*, Reema SK, Lavanya, Deepthi Y

PPCG03

Department of Pharmacognosy, Gokula Krishna college of Pharmacy, Sullurpeta-524121, SPSR, Nellore Dt. Andhra Pradesh, India.
E-mail: mohammedsameera6@gmail.com

ABSTRACT

People are using herbal medicines from centuries for safety, efficacy, cultural acceptability and lesser side effects. Plant and plant products have utilized with varying success to cure and prevent diseases. Recently there has been a shift in universal trend from synthetic to herbal medicine because side effects are in synthetic compounds. Which we can say 'Return to Nature' by using a GRAND MAA Prescription. Use of home remedies can treat several diseases. Their preparations and their method are very simple but effective biologically. Uses of medicinal plants let known to all over the world as a rich source of

therapeutic medicinal plants. Nature has bestowed our country with an enormous wealth of medicinal plants.

Keywords: Home remedies, Therapeutic agents, Medicinal plant, Preparation.

A review on potential medicinal plants for wound healing activity

Nirmala T*, Sireesha G, Nandini T, Deepak Kumar

PPCG04

Department of Pharmacognosy, Gokula Krishna college of Pharmacy, Sullurpeta-524121, SPSR, Nellore Dt. Andhra Pradesh, India.

E-mail: t.nirmala001@gmail.com

ABSTRACT

India has a rich tradition of plant based knowledge on healthcare. Wounds generally termed as physical injuries that result in an opening or breaking of the skin. There are different types of wounds which range from mild to potentially fatal. A large number of plants are used by folklore traditions in India for treatment of cuts, wounds and burns. Wounds are the result of injuries to the skin that disrupt the soft tissue. Wound healing can be defined as a complex dynamic process results in the restoration of anatomic continuity and function. Various plant products have been used in treatment of wounds over the years. Wound healing herbal extracts promote blood clotting, fight infection, and accelerate the healing of wounds. Hence in the current review a list of the plants used in traditional medicine for the treatment of wounds were screened. It is a beneficial work for researchers to provide many details about the wound healing herbs and development of safe and effective and globally accepted herbal drugs for cuts and wounds.

Keywords: Wound healing, Herbal extracts, Traditional medicine, folklore.

Current and future status of herbal medicine-a review

Pallavi A[*], Charanya Divya Teja G[1], Swathi C

PPCG05

Department of Pharmacognosy, Gokula Krishna college of Pharmacy, Sullurpeta-524121, SPSR, Nellore Dt. Andhra Pradesh, India.

Email: ammulurupallavi@gmail.com

ABSTRACT

Nature always stands as a golden mark to exemplify the outstanding phenomena of symbiosis. People are using herbal medicines from centuries for safety, efficacy, cultural acceptability and lesser side effects. The Herbal medicines are being used about 80% of the world population in the developing countries for primary health care. Herbal medicines are currently in demand and their popularity is increasing day by day. About 500 plants with medicinal use are mentioned in ancient literature and around 800 plants have been used in indigenous systems of medicine. India is a vast repository of medicinal plants that are used in traditional medical treatments. According to World Health Organization, herbal medicines are lucrative globally and they represent a market value of about US$ 43 billion a year. According to an estimate in 1991, the herbal medicine market in the European countries was about $ 6 billion, with Germany accounting for $ 3 billion, France $ 1.6 billion and Italy $ 0.6

billion while in other countries was 0.8 billion. In 1996, the herbal medicine market in the European countries was about $ 10 billion, in USA about $ 4 million, in India about $ 1.0 billion and in other countries was $ 5.0 billion. In 1997, the European market alone reached about $ 7.0 billion. The German market corresponds to about 50% of the European market, about $ 3.5 billion. The United Kingdom, $ 400 million; Spain, $300 million; the Netherlands, about $ 100 million. The global market for herbal medicines currently stands at over $60 billion annually. The sale of herbal medicines is expected to get higher at 6.4% an average annual growth rate.

Keywords: Traditional medicine, Herbal medicines,

Review on Punararnava - A potential herb

PPCG06

Pushya Ragini CH*, Hemalatha V, Divya K, Jyothsna V

Department of Pharmacognosy, Gokula Krishna college of Pharmacy, Sullurpeta-524121, SPSR, Nellore Dt. Andhra Pradesh, India.

E-mail: pushyaragini997@gmail.com

ABSTRACT

Plant and plant products have utilized with varying success to cure and prevent diseases throughout the history. In Ayurveda, Punarnava has many medicinal properties. It is called as Punarnava (Punar + nava). Punar means - once again, nava means - becoming new. Herbs play an important role in our day to day life. The medicinal value of this plant in the treatment of a large number of human ailments is mentioned in Ayurveda, Charaka Samhita, and Sushrita Samhita. It has many ethnobotanical uses (the leaves are used as vegetable; the root juice is used to cure asthma, urinary disorders, leukorrhea, rheumatism, and encephalitis) etc. *Boerhaavia diffusa* is belongs to the family Nyctaginaceae. It is widely distributed in the tropics and subtropics countries. The major active principle present in the roots is alkaloid and is known as punarnavine. Even today herbs have equally important like modern drugs as they have side effects when compared to natural drugs. So in this review exposed the information on vernacular names, microscopic, macroscopic, chemical constituents, uses and pharmacological actions on punarnava.

Keywords: Punarnava, Ethno-botanical uses, microscopic, macroscopic, *Boerhaavia diffusa*.

Conservation of medicinal plants

PPCG07

Sheela MB *,**Taruna G, Ramya lalitha B, Srinivasa Rao GH**

Department of Pharmacognosy, Saastra College of Pharmaceutical Education & Research, Nellore- 524311, Andhra Pradesh, India.

E-mail: sheela.m1994@gmail.com

ABSTRACT

The goal of conservation is to support sustainable development by protecting and using biological sources in ways that don't diminish the world's variety of genes and species and destroy important habitats and ecosystem. Development and implementation of appoxiate

management options and guidelines for sustainable harvesting of medicinal plants by applying various conservation techniques.

Cultivation practices can be developed by providing income generating activities. India has rich resource base of medicinal plants and varied climatic conditions and Topography, “Botanical garden/Herbarium of world”.80% of the world people depends on traditional medicine by Ayruveda, Siddha, Unani and Tibetan systems. Plant species become endangered or extinct mainly: Forest Depletion, Environmental factors, Rare species, vulnerable species, Critically Endangered species. We can conserve the medicinal plants by methods like 1. Biotechnological method: Micro propagation, Genetic Modification, Cryopreservation. 2. Projectworks/Workshops/Organizations or conservation agencies: Seminars, workshops, Pamphlets and posters, propagation of medicinal plants, Training centres. Government frame some agencies and project works: RSNC, JNCC, NCC, IUCN. 3. Government Species: Implement “SUSTAINABLECONSERVATION” scheme: providing support, Conserving ‘SAC’, Reduce the use of pesticides, Balancing Earth Ecosystem, Education and legalities. The overall conclusion of the presentation to initiate and support for conservation, management and sustainable utilization of medicinal plants for human and livestock healthcare and to promote in-situ conservation and sustainable use of medicinal plants in and around site of global significance and promotes conservation of threatened species and their habitats.

Key words: Ayruveda, Botanical garden, Medicinal plants, Cultivation.

Herbal drug regulatory affairs

PPCG08

Pavankumar K*, **Rajesh naidu A , Ramya Lallitha B, Srinivasa Rao G**

Department of Pharmacognosy, Saastra College of Pharmaceutical Education & Research, Nellore– 524311, A.P, India.

E-mail: mariopavan1996@gmail.com

ABSTRACT

Regulatory affairs deals with the lawn related issues to ensure, safety, efficacy, quality of the product. Mainly covers areas like approval of new formulations before manufacturing, permission for manufacturing from licensing authority, carrying manufacturing as per the guidelines of licensing authority ,advertisement of product as well as other legal matters .Each country has its own regulatory body. WHO and ICH are some important organisation that proposes guideline for the quality standards of herbal products .Herbal drug regulation in India and other countries. In India licensing authority for herbal drugs is at state level. Each state is having technical officer who is working as license authority for granting manufacturing license for herbal drugs .Government of India notified schedule –T to regulate herbal drug. In 2003 A global survey of the international health authorities indicated that most responding member 92 countries had regulations covering herbal medicines, where as 85 countries reported having a registration system for herbal medicines. In USA, herbal products are sold as dietary supplements under dietary supplement health and education. In china herbal medicines are classified into 2 groups each differs in its overall processing. In Germany herbal medicines have a special status because European

Union EU. In Australia herbal medicines are regulated under therapeutic goods legistration TGA. Some of the rules and regulation are having for herbal drug regulatory affairs and acts. Although herbs are natural sources they do have side effects which also should be assured their safety by IPR. As it represents the best model of delivering new health care advances to market in reasonable time with acceptable safety.

Key words: Regulatory affairs, New formulations, license, WHO

The role of Plants in Drug discovery

PPCG09

Jothi Manivannan C*, Ananda Thangadurai S, Abdul lathiff MKM

Department of Pharmaceutical Chemistry, Swamy Vivekanandha College of Pharmacy, Elayampalayam, Tiruchengode- 637205, Namakkal (Dt), Tamilnadu, India.

E-mail: svcpjyothi@gmail.com

ABSTRACT

Many plant-derived compounds have been used as drugs, either in their original or semi-synthetic form. Plant secondary metabolites can also serve as drug precursors, drug prototypes, and pharmacological probes. Recent developments in drug discovery from plants, including information on approved drugs and compounds now in clinical trials, are presented. There are also several plant extracts or "Phytomedicines" in clinical trials for the treatment of various diseases. In the future, plant-derived compounds will still be an essential aspect of the therapeutic array of medicines available to the physician particularly with the availability of new hyphenated analytical methods such as LC-NMR-MS and LC-SPE-NMR to accelerate their future discovery

Keywords: Natural products, Plant-derived drugs, Drug discovery, Drug development, Drug precursors.

Actiniopteris radiata (linn.): A Comprehensive review

PPCG10

Obulesu S*, Chand Basha S, Gopinath C

Department of Pharmacognosy, Annamacharya college of Pharmacy, New Boyanapalli, Rajampet -516126, Y.S.R. Dist, A.P., India.

E-mail: mpavankumarjilla@gmail.com

ABSTRACT

Actiniopterisradiata Linn. is an important medicinal plant, is fern widely distributed throughout Africa and adjacent Islands, Madagascar, Arabia, Iran, Afghanistan, Nepal, India, Sri Lanka, Burma and Australia. The plant contains several chemical constituents like Hentriacontane, Hentriacontanol, Hentriacontanone, β-sitosterol, Quercetin-3- rutinoside, β-sitosterolpalmitate. The plant is claimed to possess anti-histaminic activity, anti-cholinergic, anti-microbial activity, anti-inflammatory activity, anti-helmenthic activity, analgesic activity, anti-tubercular activity and used as styptic. The present article reveals the detailed exploration of phytoconstituents and pharmacological activities of *Actiniopterisradiata* is an attempt to provide for further research.

Keywords: *Actiniopterisradiata* Linn, Quercetin-3-rutinoside, anti-tubercular activity.

Herbs as Antidiabetic drugs

PPCG11

Sai Kumar R*, PradeepKuamar Y, S. Chand Basha S, Gopinath C

Department of Pharmacognosy, Annamacharya college of Pharmacy, New Boyanapalli, Rajampet -516126, Y.S.R. Dist, A.P., India.

E-mail: saikumarnaidu5@gmail.com

ABSTRACT

Diabetes mellitus (DM), both insulin-dependent DM (IDDM) and non-insulin dependent DM (NIDDM) is a common and serious metabolic disorder throughout the world. India has a rich heritage of traditional knowledge and is home to several important time honored systems of health care like Ayurveda, Siddha and Unani. It has been estimated that the proportion of medicinal plants in India (7500 of the 17000 higher plant species are medicinal plants) is higher than any country of the world. Always there has been renewed interest in identifying new antidiabetic drugs from natural sources, since chemical compounds are known to have undesirable side-effects. Medicinal plants, because of their often multiple targets, minor side-effects, low potentials to cause resistance and low costs, are increasingly being projected as suitable alternative sources of antidiabetic agents. Therefore, this article was aimed at finding antidiabetic principles from several medicinal plants. Medical plants play an important role in the management of diabetes mellitus especially in developing countries where resources are meager. India is the largest producer of medicinal herbs and is called as botanical garden of the world. The current review focuses on herbal drug preparations and plants used in the treatment of diabetes mellitus, a major crippling disease in the world leading to huge economic losses.

Keywords: Diabetes mellitus, Insulin, Ayurveda, Siddha

Importance of natural dyes

PPCG12

Sreenath A* , MallikarjunaRao K, Pradeep Kuamar Y, Chand Basha S, Gopinath C

Department of Pharmacognosy, Annamacharya college of Pharmacy, New Boyanapalli, Rajampet -516126, Y.S.R. Dist, A.P., India.

E-mail: sreenath2026@gmail.com

ABSTRACT

The worldwide demand for natural dyes is nowadays of great interest due to the increased awareness on therapeutic properties of natural dyes in public. Natural dyes are derived from naturally occurring sources such as plants, insects, animals and minerals. Several synthetic colorants have been banned because they cause allergy-like symptoms or are carcinogens. Among the all natural dyes, plant-based pigments have wide range of medicinal values. Although known for a long time for dyeing as well as medicinal properties, the structures and protective properties of natural dyes have been recognized only in the recent past. Many of the plants used for dye extraction are classified as medicinal and some of these have recently been shown to possess remarkable antimicrobial activity. The present review, describes the detail information about basic chemistry of the major pigments and their medicinal importance found in naturally occurring dye yielding plants, which are helpful to further development of pharmaceutical formulations.

Keywords: Natural dyes, plants, Insects, Animals.

Natural sweetening agents

PPCG13

VyshnaviPriya K*, Priyanka P, Gopinath C

Department of Pharmacognosy, Annamacharya college of Pharmacy, New Boyanapalli, Rajampet -516126, Y.S.R. Dist, A.P., India.

Email: vyshnavi316@gmail.com

ABSTRACT

Taste plays a crucial role in determining the quality of food. Within the five basic tastes, sweet taste permits the identification of energy rich nutrients. Sweeteners are the compounds that interact with taste buds and evoke a characteristic response. These can be broadly divided into two categories natural and artificial or synthetic sweeteners. One of such area of high potential is natural sweeteners. These are usually made from saps and nectars and 150 plant materials have been found to taste sweet. Natural sweeteners are further classified into saccharine and non- saccharinesweeteners. On the basis of nutritional property the sweeteners are categorized into nutritive and non- nutritive. Natural non- nutritive sweetener is stevioside obtained from *Stevia*. However current knowledge on non- saccharide natural sweeteners can be exploited in various directions. By chemical modification of natural material, semi synthetic derivatives with improved stability and reduced side effects can also be exploited.

Key Words: Natural sweeteners, Saccharides, Stevia.

Tulsi: The Indian Holy Power Plant

PPCG14

Upendrini A*, Swetha A, Lakshmi Prasanna S

Department of Pharmacognosy, Gokula Krishna college of Pharmacy, Sullurpeta-524121, SPSR, Nellore Dt. Andhra Pradesh, India.

E-mail: upendrini71@gmail.com

ABSTRACT

TULSI *(Ocimum sanctum linn.*) herb has been known from as early as the vedic period. It is an aromatic plant in the family lamiaceae. It is cultivated throughout the South east Asian tropics. It is available in different species like ramatulsi, krishnatulsi and shyama tulsi. Commonly used in ancient systems including ayurveda, greek, roman, siddha and unani to cure certain diseases like respiratory disorders, heart disorders, skin disorders, eye disorders and teeth disorders. The various parts like leaves, roots and seeds are used in various treatments. The major chemical constituents are bornyl acetate, cadinene, camphene, camphor, carvacrol, eugenol, methyl ether. It is commonly used in cough, cold, mild indigestion and diminished appetite. This article outlines the knowledge on this plant.

Key words: ***O****cimum sanctum linn*, Ayurveda, Tulsi leaves, Eugenol.

Health benefits of herbs

PPCG15

Chandra Sukeerthi K*, Meleesa Madhu veena K

Department of Pharmacognosy, Gokula Krishna college of Pharmacy, Sullurpeta-524121, SPSR, Nellore Dt. Andhra Pradesh, India.

E-mail: sukeerthi000@gmail.com

ABSTRACT

The word herb comes from the latin word herba, meaning grass. Herbs are small plants that have a fleshy or juicy stem when they are young. They help in healing wounds faster, make up for nutritional suppliments. Herbs strengthen the immune system, lower blood sugar and cholesterol, have anti-inflamatory properties and prevent alzheimer's diseases. Herbs eliminate the nutritional deficiencies in your body and thus restore the correct function of the body. It also said that herbs nourish every part of the body with their vitamin and mineral content. They are used for treating various types of cancer, helps in skin care, hair care and dental care. Medicinal herbs treated most of the health ailments when there was no use of intricate medicinal instruments and drugs. These herbs worked wonders with their juices, extracts, barks, leaves, flowers and sometimes entire plants. This article outlines the health benefits of herbs.

Key words: Anti-inflammatory proprties, alzheimer's diseases, hair care.

Powerful ancestral plant - Ashwagandha

PPCG16

Divya K*, **Haritha V, Madhavi P**

Department of Pharmacognosy, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist, A.P., India.

E-mail: lalasa.sangeethika22@gmail.com

ABSTRACT

Ashwagandha is also called as Withania somnifera belongs to the family Solanaceae. It is also called as INDIAN GINSENG because it has the property to cure all the disease. This plant grows widely in all dry parts and subtropical India. It occurs in Madhya pradesh, Uttar pradesh, Punjab. It is a medicinal plant used from 3000 years by oldest medicinal system in world ayurvedic medicine. The main chemical constituent of Ashwagandha are alkaloids and steroidal lactones among the various alkaloids, withanine, somniferine and with anolide (sterol) are the main constituents . The root and leaves are used for its medicinal property. It boost up immune system. It has sedative and hypnotic effect. It also has hypotensive and respiratory stimultant action. Traditionally it has been used in treatment of rheumatism, gout, hypertension & skin diseases. The leaf extract shows activity against staphylococcus aureus and ranikhet virus.

Keywords: Withania, alkaloid, steroidal lactones, hypotensive.

Importance of herbal drugs in cosmetic industries

PPCG17

Suma AH*, **Vinusha Bhavani A**

Department of Pharmacognosy, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist, A.P., India.

Email: sumaharikumar03@gmail.com

ABSTRACT

The cosmetics are the utility products used extensively throughout the world for maintaining and improving general appearance of face and other parts of body e.g. mouth, hand finger, eye, hair, etc. It includes creams, powers, facepack, lotions, moisturizers, shampoo, hair oil, conditioners, nail polish, etc. Smooth, Shinning, healthy skin and hair certainly count for a beautiful woman or handsome man. Herbal cosmetic also known as "natural cosmetic". With the beginning of civilization, mankind had the magnetic dip towards impressing others with their looks. At the time ,there were no fancy fairness creams or any cosmetic surgeries. The only thing they had was the knowledge of nature, compiled in the ayurveda. With science of ayurveda several herbs and floras were used to make ayurvedic cosmetics that really worked. Ayurvedic cosmetics not only beautified the skin but acted as the shield against any mankind of external affects for the body. Herbal cosmetics like herbal face wash, herbal conditioner, herbal soaps ,herbal shampoo, and many more are highly acclaimed by the masses. The best thing of the herbal cosmetics is that it is purely made by the herbs and shrubs. Necessary efforts are required to associate the modern cosmetology with bio active ingredients based on our traditional system of medicine leading to emergence of novel cosmoceuticals for skin and body care.

Key words: Herbal cosmetics, traditional system of medicine, novel cosmoceuticals, natural cosmetics, ayurveda.

Miracle plant-Aloe vera (Grikumari)

PPCG18

Mukunda M*, Likhitha K

Department of Pharmacognosy, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist, A.P., India.

Email: marupurumukunda97@gmail.com

ABSTRACT

Aloe Vera is one of the most powerful and well- known medicinal plant .It is a species originated in east Africa, Family Liliaceae. It also grows in the tropics and in several continents. It has been used for more than 5000 years, and it is still been used. Traces of ALOE VERA have been found in numerous civilizations traditional Chinese medicine, ancient Mediterranean civilizations, ancient Egypt, Greece. All members of the Aloe genus require sandy or gravelly soil or else then can be grown poor soil with very good drainage. Aloe Vera is composed of 99%of water and 1% of vitamins, minerals and trace elements. Besides these, they also contain certain enzymes effective for metabolic health, essential vitamins, minerals, poly-saccharides that render immune-stimulating properties along with its magical healing touch. Aloe Vera is the major source of anthraquinone glycosides. It is commonly available in the form of creams, gel, juice or capsules. The gel is mainly used for externally and the capsules and juice are used internally. The substances in aloe Vera such as salicylic acid, saponins and sterols provide its analgesic, anti-inflammatory and antiseptic properties. It is also used as purgative in constipation. Aloe Vera used as cosmetic and beauty products offers incredible benefits for the skin. They help moisturize the skin, gets rid of fine lines, wrinkles, dead cells on the surface of the skin, and makes the skin soft and glowing. This review article focus on therapeutic uses of aloe vera

Keywords: Purgative, Anthraquinone, Aloe Vera, poly-saccharides.

Standardisation and anti oxidant evaluation of cultivated species of *Mentha arvensis*

PPCG19

Ramasubramania raja R*, M. Sreenivasulu

Department of Pharmacognosy, Narayana Pharmacy College,Chintharedypalem-524003, SPSR Nellore Dist., A.P. India.

E-mail: rsmr_raj@yahoo.co.in

ABSTRACT

Mentha arvensis is a belonging of Lamiaceae family; the plant is largely imported from Japan so it is called as Japanese Mint. This plant is widespread garden herb and is extensively cultivated in Northern India for food seasoning as a household remedy and for its industrial used also. The present study is revealed pharmacognostical screening like morphological characters based upon the sensory organ used described. The microscopical characters determined by using transverse section techniques. The physical evaluation of *metha arvensis* Ash values, extractive values, foreign organic material and crude fibre contents are within the limit of world health organisation. The hydro alcoholic extract of *Mentha arvensis* phytochemical screening is performed the based on the colour reaction test. The anti oxidant potential was screened by using DPPH method. The phytochemical screening of hydro alcoholic extracts presenting the flavonoids, resins, triterpenoids, tannins and phenolic groups. The phyto chemical estimated the chief phyto constituents like phenolic content and flavonoid. The percentage of antioxidant potential is 91.28, by DPPH method. The estimation value of total phenol content is 936±71, and total flavonoid conent is 479±66. In this work identification and characterisation of the purity and quality of the monograph of the *Mentha arvensis*. This work is more useful to further researchers.

Keywords: *Mentha arvesis*, Flavonoid, Terpenoids, Phenol, DPPH,

Indigenous Systems of Medicines

PPCG20

Prasanthi K*, Sai Rishitha Y, Supraja Sravani B, Pavani D

Department of Pharmacognosy, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist, A.P., India.

E-mail: prasanthik200@gmail.com

ABSTRACT

It is a well-known fact that traditional systems of medicines always played important role in meeting the global health care needs. They are continuing to do so at present and shall play major role in future also. The system of medicines which are considered to be Indian in origin or the systems of medicine, which have come to India from outside and got assimilated in to India culture are known as Indian systems of medicine. India has the unique distinction of having six recognized systems of medicine in this category. They are Ayurveda, Siddha, Unani and yoga, Naturopathy and Homeopathy. Though homeopathy came to India in 18^{th} century, it is completely assimilated into the Indian culture and got enriched like any other traditional systems hence it is considered as Part of Indian systems of medicine. A part from these systems there are large number of healers in the folklore stream who have not been organized under any category. In the present review, attempt would be made to provide brief profile of three systems to familiarize the readers about them so as to facilitate acquisition of further information.

Key words: Traditional systems, Homeopathy, Naturopathy, Ayurveda.

Herbs used in the treatment of atherosclerosis

Srihari G*, Pavan kumar B, Thirumalai V

Department of Pharmacognosy, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist, A.P., India.

E-mail: sriharihari13@gmail.com

PPCG21

ABSTRACT

Atherosclerosis is a condition in which cholesterol, calcium and other substances, collectively referred to as plaque, clog the arteries. This blocks blood flow to vital organs, especially the heart. Atherosclerosis is one of the major problems in modern medicine and public health. Artherosclerosis leads to many health problems including stroke, heart attack, kidney disease and dementia. Long-term toxicity and cost may present problems for the use of conventional medication in a long-term. Drugs based on natural products can be a good alternative. There are a number of supplements, many derived from plants, that could help treat atherosclerosis. Natural products can be considered as promising drugs for anti-atherosclerosis therapy Eg: Spirulina platensis, Allium sativum, Triticum vulgaris and Glycyrrhiza glabra.

Keywords: Atherosclerosis, cholesterol, Stroke, Arteries.

Herbal medicines that stimulate insulin secretion of the pancreas that are used - to treat diabetes mellitus.

Venkatesh K*, S. Chand Basha, M.Madhu, Y. Pradeep Kumar, C. Gopinath

Department of Pharmacognosy, Annamacharya college of Pharmacy, New Boyanapalli, Rajampet -516126, Y.S.R. Dist, A.P., India

E-Mail: venkateshkarnati504@gmail.com

PPCG22

ABSTRACT

Herbal medicines have been used in the management of diabetes in traditional medicine. This chapter reviews recent findings of the most popular herbs reported to treat diabetes through their relevant mechanistic pathways. These include increased insulin secretion, improvement in insulin sensitivity, enhanced glucose uptake by Clinical and pharmacological evidence has demonstrated the insulin secretagogue activity of several anti-diabetic herbs. Different medicinal plants have been reported to stimulate insulin release through cell permeability, increase in b-cell number and size, the stimulation of b□cell function and/or protection from b-cell damage and death. Over time, many T2DM patients will require combinational therapy with drugs to tackle the multi-facetted nature of DM in order to improve therapeutic outcomes. Therefore, the combination of Therefore, the combination of oral glycaemic-agents with insulinotropic herbs would be potentially useful. The herbal drugs that increase insulin secretion, Panax Ginseng, Momordica Charantia, Gymnema Sylvestre. So in future we would expect that these drugs can act as natural stimulators for insulin release particularly in diabetes mellitus patients.

Keywords: Herbal medicines, b-cell number, Panax Ginseng , Momordica Charantia, Gymnema Sylvestre, diabetes mellitus patients.

A new therapy for Cancer by using *Clostridium sporogenes better than radiation therapy* at low cost without any adverse effects.

Manasa Rekha M*, Bharath Kumar A, Gopinath C

Department of Pharmacognosy, Annamacharya college of Pharmacy, New Boyanapalli, Rajampet -516126, Y.S.R. Dist, A.P., India

EMAIL: manasarekharoyal@gmail.com

PPCO01

ABSTRACT

Cancer is characterized by proliferation of abnormal cells which multiply out of control destroying healthy tissues and endangering life. A number of treatments are available for cancer such as chemotherapy, radiation therapy, Hormonal therapy, surgery, these therapies induces various adverse reaction which cannot be tolerated such as pain, *Clostridium sporogenes* In order to reduce the adverse drug reactions as well as cost of present cancer drugs here is the low cost cancer drug, i.e, The bacterium is *Clostridium sporogenes,* which is widespread in soil and it is Injected into into mices that have been already induced with a powerful carcinogenic agent maleic hydrazine , the bacterium grows in solid tumors and releases an enzyme which triggers a separately injected "pro-drug" to kill cancer cells. Here we used the anti cancer drug ,the anti-cancer drug only becomes active when it meets the bacterial enzyme in the tumor and therefore only targets cells nearby. By this therapy there is reduction in tumor cell growth. One improvement can be inserted that is a gene into the bacterium's DNA that made it produce greater quantities of the trigger enzyme in the tumor. This also improved the enzyme's ability to convert the "pro-drug" into its active form. It is shown that their candidate therapy will leave healthy cells alone because, they will only grow in oxygen-depleted environments, ie the centre of solid tumors. This is a totally natural phenomenon, which requires no fundamental alterations and is exquisitely specific. it can be exploited this specificity to kill tumor cells but leave healthy tissue unscathed,"The hope is that *C. sporogenes* will eventually prove to be a simple and safe way to cure a wide range of solid tumors. Minton said their therapy will kill "all types of tumor cell". it is better than surgery, especially for patients at high risk or who have tumors that are difficult to reach. By this attempt we led a new approach for cancer therapy at low cost in order to meet the needs of poor people.

Keywords: Cancer, *Clostridium sporogenes,* chemotherapy, radiation therapy, Surgery.

Antioxidant and free radical scavenging activities of various solvent extracts of *Indigofera astragalina* dc.

PPCO02

Senthil Kumar R*, Vinoth Kumar S

Department of Pharmaceutical Chemistry, Swamy Vivekanandha College of Pharmacy, Elayampalayam, Tiruchengode- 637205, Namakkal (Dt), Tamilnadu, India.

E-mail: thrisen@gmail.com

ABSTRACT

In the present study, the antioxidant and free radical scavenging activities of various solvent extracts of *Indigofera astragalina* (Fabaceae) were evaluated by different *in vitro* antioxidant assay models. Dried plant material of *I. astrgalina* was successively extracted with various solvents of increasing order of polarity viz. hexane, chloroform, ethyl acetate, ethanol and water. All the prepared extracts were screened for their free radical scavenging and antioxidant potential using various *in vitro* assay systems. Among the tested extracts, ethyl acetate and ethanol extracts exhibited strong antioxidant and scavenging activity on

ABTS radical cation, DPPH free radical, hydroxyl radical scavenging assay, hydrogen peroxide, nitricoxide and superoxide radical. Both ethyl acetate and ethanol extracts showed strong activity in Iron reducing power assay. Chloroform and aqueous extracts showed moderate activity, whereas hexane extract did not show any activity against all the tested models. The observed antioxidant and free radical scavenging activities of the extracts were compared with standard antioxidants used such as ascorbic acid and quercetin. Preliminary phytochemical screening revealed that the ethyl acetate and ethanol extracts contains rich amount of flavonoids, tannins polyphenolics, saponins and glycosides. The antioxidant and free radical scavenging activity may be due to the phenols and flavonoids present in the ethyl acetate and ethanol extract.
Conclusion: The results obtained have revealed that the plant *Indigofera astragalina* could be considered as a very good antioxidant source with therapeutic potential.

Key Words: *Indigofera astragalina*, antioxidant, free radical scavenging activity, flavonoids.

Pharmacological activity of hydro alcoholic extract of *G. Edulis* linn

Pranabesh S

Assistant Professor, Department of Pharmaceutical Chemistry, Seven Hills College of Pharmacy, Venkatramapuram- 517561, Tirupathi.

Email: pranawesh@rediffmail.com

PPCO03

ABSTRACT

Recently a lot of attentions have been drawn by the marine algae because it contains different bioactive compounds which are useful in the medicinal field. *Gracilaria edulis* (Gmelin) Linn belonging to family *Rhodophytaceae* can be used in various disease like cancer, acquired immune-deficiency syndrome (AIDS), inflammation, pain, arthritis, as well as viral, bacterial, and fungal infections. Anti oxidant activity is a growing demand from the pharmaceutical industry where there is interest in anti-aging and anticarcinogenic natural bioactive compounds, which possess health benefits. Reactive oxygen species (ROS) such as superoxide anion (O-2), hydroxyl radical (HO.) and hydrogen peroxide (H2O2) are formed during aerobic life as a result of the metabolism of oxygen. DNA, cell membranes, proteins and other cellular constituents are target site of the degradation processes, and consequently induce different kinds of serious human diseases including atherosclerosis, rheumatoid arthritis. Therefore, consumption of antioxidant and addition of antioxidant in food materials protect the body as well as foods against decay of food. Therefore purpose of our present study is to evaluate cytotoxic activity of hydro-alcholic extract of *Gracilariaedulis* (Gmelin) extract using Human cerviacal adenocarcinoma (HeLa) , Osteosarcoma cell lines (MG-63),. Breast adenocarcinoma (MCF-7). The anticancer activity of the extract have shown less significant activity against the different cell line used for invitro activity. Simultaneously, *in vitro* antioxidant activity was also carried out using H_2O_2 and DPPH models.

Keywords; *Gracilaria edulis*, wound healing activity, anti oxidant

Preclinical evaluation of antinociceptive and anti-inflammatory effects of aqueous plant extract of *Pedalium murex* linn.

Sudhakar P*[1], Dr. Vinoth Prabhu V[1], Jothi Manivannan C[2], Anand R[1]

[1] *Department of Pharmacology, Swamy Vivekanandha College of Pharmacy, Elayampalayam - 637 205, Tiruchengode, Tamil Nadu, India*

[2] *Department of Pharmaceutical Chemistry, Swamy Vivekanandha College of Pharmacy, Elayampalayam - 637 205, Tiruchengode, Tamil Nadu, India*

Email: sudhakar00pharma@gmail.com

PPCO04

ABSTRACT

The object of the study was to investigate the possible antinociceptive and anti-inflammatory potential of aqueous whole plant extract of *Pedalium murex* Linn. (AEPM) in selected experimental animal models. Antinociceptive activity was assessed by acetic acid induced writhing and hot plate analgesic method. Anti-inflammatory effect was evaluated by using carageenan-induced acute paw edema model. Primary phytochemical screening of AEPM indicated the presence of flavonoids, carbohydrate, glycosides, steroids, phenols, alkaloids and tannins. Diclofenac sodium (20 mg /kg p.o.) and codeine (5 mg/kg, p.o.) was used as reference standard. The AEPM at 200 and 400 mg/kg p.o. showed significant inhibition of abdominal writhing evoked by acetic acid and also increased the pain threshold towards the thermal source in a dose dependent manner. In carrageenan induced acute rat paw edema the AEPM at a dose of 200 and 400 mg/kg p.o. showed significant ($p<0.001$) decrease in paw edema volume in a dose dependent manner. The results of this study concluded that AEPM showed antinociception in acetic acid induced writhing method may be by inhibiting peripheral pain receptor present on cell lining of peritoneal cavity. In hot plate method, may be by involvement of opioid receptor. The carragenan induced inflammation AEPM possibly act by inhibiting release and /or action of histamine, serotonin, kinin and prostaglandin like substances.

Key words: *Pedalium murex* Linn, Phytoconstituents, Antinociceptive, Anti-inflammatory activity.

Hepato protective and antiulcer properties of isolated compound from *Cucumis sativus* l.

PPCO05

Vaijayanthimala P[2]*, Sureshkumar S[1], Sangameswaran B[2]

[1] *J.K.K. Nataraja College of Pharmacy, Department of Pharmaceutical Chemistry, Komarapalayam, Tamilnadu, India.*

[2] *SSM. College of Pharmacy, Department of Pharmaceutical Chemistry, Erode, Tamilnadu, India.*

E-mail: vaijsiva@gmail.com

ABSTRACT

In present investigation steroid isolated from ethanol extract of *Cucumis sativus* L. leaves was carried out by column chromatography method. The column chromatography system is broadly used for separation, isolation, and purification of the natural products. The fundamental principal followed for separation of the compounds is adsorption at the solid liquid interface. The fractions of 56-59 eluted with Petroleum ether: chloroform (60:40) gave yellow residue and showed one major spot with minor impurities on TLC. Repeated recrystallisation with chloroform: methanol (90:10) gave colourless compound. The colour less compound showed a single spot in n-hexane: ethyl acetate (68:32) and was further proved for its homogeneity with different solvent system by TLC and designated as

compound 1 (ISO-1).From preliminary characterization using IR,NMR and MASS spectra it was identified as steroids. The compound was evolved to show moderate hepatoprotective and antiulcer activity at 150mg/kg.

Key words: *Cucumis sativus* L., Hepatoprotective, Antiulcer.

Pharmacological properties of *Biophytum sensitivum* (l.) Dc. – A review

Vasuki K*

Assistant Professor, Department of Pharmacognosy, Swamy Vivekanandha College of Pharmacy,Tiruchengode, Namakkal - 637205, Tamilnadu, India.

Email: 007vasuki@gmail.com

PPCO06

ABSTRACT

Research on medicinal plants began to focus on discovery of natural products as potential active principles against various diseases. Medicinal plants are very interesting, have the ability to produce remarkable chemical structures with diverse biological activities. *Biophytum sensitivuz* (L.) DC. *(*Family: Oxalidaceae*)* is used as traditional medicine to cure variety of diseases. During the last few decades, extensive research has been carried out to elucidate the chemistry, biological activities, and medicinal applications of *B. sensitivum.* Phytochemical analysis has shown that the plant parts are rich in various beneficial compounds which include flavonoids and phytosterols. Extracts and its bioactive compounds have been known to possess antibacterial, anti-inflammatory, antioxidant, antitumor, radioprotective, chemoprotective, antimetastatic, antiangiogenesis, wound-healing, immunomodulation, anti-diabetic, and cardioprotective activity. Conclusion**:** The present review has been carried out to shed light on the diverse role of this plant in the management of various ailments facing us.

Keywords: *Biophytum sensitivum*, medicinal plant, pharmacological properties.

The first creation of Human embryonic stem cells by cloning

Sasi Rekha NM*, Glory Florence M, Pavithra M, Ramya T

Department of Pharmacology, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist, A.P., India.

Email: sasirekha23@gmail.com

PPCO07

ABSTARCT

Stem cell is an undifferentiated cell of a multicellular organism which is capable of giving rise to indefinitely more cells of the same type, and from which certain other kinds of cell arise by differentiation. There are two broad types of *stem* cells: embryonic *stem* cells, which are isolated from the inner *cell* mass of blastocysts, and adult *stem* cells, which are found in various tissues. In adult organisms, *stem* cells and progenitor cells act as a repair system for the body, replenishing adult tissues. Embryonic stem (ES) cells are cells derived from the early embryo that can be propagated indefinitely in the primitive undifferentiated state while remaining pluripotent; they share these properties with embryonic human body germ (EG) cells. Candidate ES and EG cell lines from the human blastocyst and embryonic gonad can differentiate into multiple types of somatic cell. A donor cell from a body tissue such as skin is fused with an unfertilized egg from which the nucleus has been removed. The egg 'reprograms' the DNA in the donor cell to an embryonic state and divides until it has

reached the early, blastocyst stage. The cells are then harvested and cultured to create a stable cell line that is genetically matched to the donor and that can become almost any cell type in the human body. Human embryonic stem cells can spontaneously differentiate into insulin producing cells can secrete insulin and can express other beta cell markers. Vitamins and proteins are used to turn stem cells into retinal cells, millions of healthy cells injected into black of eye. After several weeks, sight begins to improve also to produce any type of cells in the body.

Keywords: Stem cell, Embryonic, Blastocyst.

Evaluation of In-vitro anti-urolithiasis activity of *Hibiscus tiliaceus*

Umamaheshwari L*, Rajeswari G, Srinivasa Rao G

Department of Pharmacology, Saastra College of Pharmaceutical Education & Research, Nellore– 524311, A.P, India.

Email: anushachowdarylekkala@gmail.com

PPCO08

ABSTRACT

Objective: The present study was carried out to evaluate the invitro anti-urolithiasis activity of leaf extract of *Hibiscus tiliaceus*.

Materials and methods: The inhibition of in-vitro calcium-oxalate crystal (a major component of most urinary stones) formation by various extracts was investigated by different methods. Synthetic urine supersaturated with calcium oxide was prepared and urolithiasis was investigated by inhibition assay, aggregation assay and sedimentary crystal formation. Crystal formation in synthetic urine was studied at different time intervals using methanolic leaf extract of *Hibiscus tiliaceus* at different concentrations 10, 25, 50, 75,100 mg/ml each respectively.

Results: Among different concentrations of extracts when compared to control group, the inhibitory potency of leaf extract of 100 mg/kg was found to be more significant ($P<0.05$).

Keywords: calcium oxalate, urolithiasis, *Hibiscus tiliaceus*

A review on Immunomodulators

PPCO09

Rajeswari G*, Nithya G

Department of Pharmacology, Saastra College of Pharmaceutical Education & Research, Nellore– 524311, A.P, India.

Email: rajeswarim.pharm6@gmail.com

ABSTRACT

The Immune System is the most complex biological systems in the body. At the time of infection immune system go under the attack of a large number of viruses, bacteria and fungi. The immune system is a part of body to detect the pathogen by using a specific receptor to produce immediately response by the activation of immune components cells, cytokines, chemokines and also release of inflammatory mediator. They modulate and potentiate the immune system. The immunomodulatory property of plants is being studied with greater interest in recent years. Medicinal plants impart significant roles in the prevention of human being from various pathogenic microorganisms and the diseases. This is more so because of the growing awareness regarding the need to modulate the immune system to achieve the desirable effects of preventing an infection rather than treating it at an advanced state. Plant derived materials glycosides alkaloids flavanoids, saponins and

polysaccharides etc., have been shown to stimulate immune system. In nature there are various medicinal plants which are used as immunomodulator agents. This review is an attempt to put various plants in one place which are used as immunomodulatory agents.

Key words: Immune System, Chemokines, Immunomodulatory, Medicinal plants

Immunomodulatory activity of methanolic leaf extract of *Hibiscus tiliaceus*

Mohan M*, Rajeswari G, Swathi Krishna KV, Krupasagar K

Department of Pharmacology, Saastra College of Pharmaceutical Education & Research, Nellore– 524311, A.P, India.

Email: mohanindia21@gmail.com

PPCO10

ABSTRACT

Humans are continually exposed to a variety of pathogenic microorganisms, and protection from these microbes is achieved by a complex array of immune defence mechanisms. The immune system, which is made up of special cells, increasing number of people is adopting alternative systems of medicine owing to the irreversible effects of modern drugs and therapies.The objective of the study is to evaluate the immunomodulatory effect of methanolic leaf extract of *Hibiscus tiliaceus* (MLHT) in pyrogallol induced immunosuppressed wistar rats. In order to induce immunosuppression in rats pyrogallol (100 mg/kg/day, p.o.) is used and septilin syrup (1ml/100gm/day, p.o.) used as standard as it is immunostimulating agent. Haematological and biochemical were estimated by standard methods.Oral administration of MLHT showed a significant increase in the production of circulating antibody titre in response to sheep red blood cells (SRBCs). MLHT significantly (P<0.001) potentiated the DTH reaction by facilitating the footpad thickness response to SRBCs in sensitized rats. Also MLHT evoked a significant (P<0.001) increase in percentage neutrophil adhesion to nylon fibers and phagocytic activity. An oral administration of the MLHT showed immunomodulatory effect in wistar rats in a dose dependent manner. From the results obtained and reported phytochemical studies *Hibiscus tiliaceus* has a significant effect on both humoral and cellular immunity in experimental animals, this may be attributed to the polyphenols and flavanoid content of the plant extract.

Keywords: Immunomodulatory, *Hibiscus tiliaceus*, humoral immunity, cellular immunity.

Evaluation of anti ulcer activity of ethanolic leaf extract of *Ceiba pentandra* in Aspirin plus pylorus ligated wistar rats

Eswar T*, Sampath kumar G, Rajeswari G, Dr. Srinivas Rao GH.

Department of Pharmacology, Saastra College of Pharmaceutical Education & Research, Nellore– 524311, A.P, India.

E-mail: eswarcherry97@gmail.com

PPCO11

ABSTRACT

Peptic ulcer is a conglomerate of heterogenous disorders and generally recognized that peptic ulcer is caused by lack of equilibrium between the gastric aggressive factors and the mucosal defensive factors. Some other factors such as inadequate dietary habits, excessive ingestion of NSAID'S, infection by helicobacter pylori may be responsible for development of peptic ulcer. *Ceiba pentandra* leaves were obtained, powdered and subjected to continuous hot

extraction with 90% ethanol. The total ethanol extract was filtered and dried at 40°C under reduced pressure in a rota evaporator. The yield of ethanol extract was found to be 100 gm. Adult Wistar rats were selected and the animals were divided into four groups of six animals each. The grouped animals were treated with aspirin and drugs after 7 days of treatment pylorus ligation is done with prior fasting of 12-18 hours, after 4 hrs the animals were anesthetized with ether and stomach was incised along the greater curvature, rinsed with saline to remove gastric contents and blood clots examined by a 10X magnifier lens to assess the formation of ulcers. The numbers of ulcers were counted. Aspirin plus pylorus ligation induced gastric ulcer the ethanol extract showed significant reduction in total acidity and ulcer when compared with standard drug ranitidine so the possible mechanism of antiulcer action of extract may be due to its flavonoids content.

Key words: *Ceiba pentandra,* NSAID'S, Peptic ulcer, Antiulcer.

Evaluation of anti-diabetic activity of ethanolic extract of *Boswellia ovalifoliolata* stem bark against alloxan induced diabetes in wistar rats

Akilaneswari RK*, Rajeswari G, Dr. Srinivas Rao GH.

Department of Pharmacology, Saastra College of Pharmaceutical Education & Research, Nellore– 524311, A.P, India.

Email: akilahoney1996@gmail.com

PPCO12

ABSTRACT

Diabetes is a group of metabolic diseases characterized by hyperglycemia resulting from defects in insulin secretion, insulin action, or both. The total number of people with diabetes is projected to increase from 171 million in 2000 to 366 million in 2030, Alternative medicines particularly herbal medicines are available for the treatment of diabetes. Common advantages of herbal medicines are effectiveness, safety, affordability and acceptability. Hence, the present investigation was under taken to evaluate the anti- diabetic activity of ethanolic extract of *Boswellia ovalifoliolata* stem bark in alloxan induced diabetic rats to confirm the Pharmacological evidence in support of Folkfore claim. Oral administration of ethanolic extract in the doses of 100, 150 & 200 mg/kg body weight to white Wistar albino rats significantly reduced their blood sugar level in allxon induced diabetic rats. *B. ovalifoliolata* have shown a good anti diabetic activity by decreasing serum glucose, lipid profile (Total Cholesterol, LDL, and Triglycerides) , urea and liver parameters and increase in Total protein ,Albumin, Body weight and HDL. The antidiabetic activity of the plant may be due to the presence of flavonoids such as quercetin and rutin.

Key words: Diabetes, *Boswellia ovalifoliolata,* alloxan, Insulin.

Zika-virus a globally threatening illness

Ravikumar M*, Mahendra E, Jeganath S, Swathi Krishna KV, Srinivasa Rao G

Department of Pharmacology, Saastra College of Pharmaceutical Education & Research, Nellore– 524311, A.P, India.

Email: Ravi4ubujji@gmail.com

PPCO13

ABSTRACT

Zika fever is an illness caused by the zika virus is a member arbovirus of the virus family flaviviridae and the genus flavivirus transimmited by day time active "Aedes mosquitoes" such as *A. aegypti* and *A. albopictus*. Symptoms are similar to other flaviviruses

such as Dengue fever or the alpha virus chikungunya, but are milder in form and usually last four to seven days. Most causes (60-80%)are asymptomatic. In May 2015 the Pan American Health Organisation (PAHO) issued an alert regarding the first confirm Zika virus infection in Brezil. The outbreak in brazil led to reports of "guillain-barre" syndrome and pregnant women giving birth to babies with birth defects and the poor pregnancy out comes. There is currently no vaccine but development is a priority of the "National Institution of Health. The virus is spread by mosquitoes, making vector control and avoidance an essential element to disease control. Worldwide concern over zika virus and its temporal and geographical association with clusters of birth and neurological conditions escalated with WHO declaring Public Health Emergency of International concern.

Key words: Zika fever, zika virus, aedes mosquitoes, WHO, PAHO

Factors affecting the non-adherence of antihypertensive drugs

Soundarya N*, **Pranabesh S, Niranjan Babu M**

Department of Pharmaceutical Chemistry, Seven Hills College of Pharmacy, Venkatramapuram- 517561, Tirupathi.

E-mail: pranawesh@rediffmail.com

PPCO14

ABSTRACT

Adherence with antihypertensive therapies is a key factor to control blood pressure among people with hypertension. The capability currently exists to lower blood pressure to goal levels in most hypertensive individuals. As with the treatment of other chronic illness in which long term treatment is required, adherence to prescribed medication for hypertension can be a problem. Studies have shown that 50% of individuals discontinue antihypertensive medication within 6 to 12 months of their initiation. There are large number of reasons that influence the patient adherence. It is noteworthy that the emergence of the disease aggravation is closely associated with poor blood pressure control and this has a direct relationship with poor adherence to treatment. Non adherence is classically considered a complex and multidimensional phenomenon that prevents the achievement of therapeutic goals and may be a source of frustration for health professionals. Estimates indicate that the degree of nonadherence to the global CD treatment ranges from 30% to 50% being more evident in pharmacotherapy. As trigger of non adherence to pharmacotherapy, epidemiological studies suggest several cactors, especially socioeconomic ones such as low income and low education and care factors such as the number of medication consumed and failure to visit the doctor and froup activites. Team based care, pharmacist led multicoponent.

Keywords: antihypertensive, non-adhrence, medication

Maturation of human embryonic stem cells: an innovative tool for treatment of preexisting diabetes in mice

PPCO15

Abdulnasser M*, Sucharitha P

Sri Venkateswara College of Pharmacy, RVS Nagar, Chittoor- 517127, A.P., India.

E-mail: abdulnasser2299@gmail.com

ABSTRACT

Diabetes is a chronic debilitating disease that results from insufficient production of insulin from pancreatic β-cells. Islet cell replacement can effectively treat diabetes but is currently severely limited by the reliance upon cadaveric donor tissue. We have developed a

protocol to efficiently differentiate commercially available human embryonic stem cells (hESCs) into a highly enriched PDX1+ pancreatic progenitor cell population that further develops to mature pancreatic endocrine cells. Immature pancreatic precursor cells were transplanted into immune-deficient mice with Streptozotocin-induced diabetes, and glycemia was initially controlled with exogenous insulin. As graft-derived insulin levels increased over time, diabetic mice were weaned from exogenous insulin and human C-peptide secretion was eventually regulated by meal and glucose challenges. Similar differentiation of pancreatic precursor cells was observed after transplant in immune-deficient rats. Throughout the *in-vivo* maturation period hESC-derived endocrine cells exhibited gene and protein expression profiles that were remarkably similar to the developing human fetal pancreas. This innovative findings support the feasibility of using differentiated hESCs as an alternative to cadaveric islets for treating Diabetes, which opens the door for permanent resolution to it.

Keywords: Diabetes, hESCs, β-cells, Glycemia, Immuno-deficient.

Evaluation of antiulcer activity of *Rhinacanthus nasutus* (l.)Leaves in rats

Gopi G*, Chand Basha S, Gopinath C

Department of Pharmacology, Annamacharya college of Pharmacy, New Boyanapalli, Rajampet -516126, Y.S.R. Dist, A.P., India.

E-mail: schandbasha20@gmail.com

PPCO16

ABSTRACT

Ethanolic extract of *Rhinacanthusnasutus* was evaluated for its antiulcer activity against pyloric ligation induced ulcer in Wister rats. The ethanolic extract of *Rhinacanthus nasutus* at the dose rate 400mg/kg an 200 mg/kg per orally exhibited significant protection against pyloric ligation induced gastric ulceration. The present investigation revealed that *Rhinacanthus nasutus* exhibited significant antiulcer activity by enhancing potential of gastric mucosa thereby reducing mucosal damage.

Keywords: Antiulcer activity, Herbal Drug, Pyloric ligation induced gastric ulceration.

Anti -inflammatory activity of *Dillenia indica* l. Leaf

Jagadeesh Kumar T*, Madhu M, Chand Basha S, Nirmala Devi B, Gopinath C

Department of Pharmacology, Annamacharya college of Pharmacy, New Boyanapalli, Rajampet -516126, Y.S.R. Dist, A.P., India.

E-mail: jagadeeshkumar465@gmail.com

PPCO17

ABSTRACT

The present investigation was carried out to evaluate the ethanolic extract *Dillenia indica* L. plant leaf extracts for anti-inflammatory activity by membrane stabilization effect by inhibiting hypotonicity induced lysis of erythrocyte membrane and has showed significant membrane stabilization property comparable to the standard drug Aspirin. In addition, the Ethanolic extract of *Dillenia indica* L. found to contain a noticeable amount of phenols, which play major role in controlling antioxidant. The results of this study show that the ethanolic extract of *Dillenia indica* L. can be used as accessible natural source against inflammation.

Keywords: *Dillenia indica L.*, Membrane stabilization effect.

Anthelmintic activity of methanolic extract of *Peltophorum pterocarpum* leaves

Dharma Reddy B*, VinolyJeevan B, Chand Basha S, Gopinath C

Department of Pharmacology, Annamacharya college of Pharmacy, New Boyanapalli, Rajampet -516126, Y.S.R. Dist, A.P., India.

E-mail: mpavankumarjilla@gmail.com

PPCO18

ABSTRACT

Peltophorum pterocarpum belonging to family Fabaceae and traditionally it is claimed to be used in the treatment of stomatitis, insomnia, constipation, ringworm, dysentery, muscular pains, sores and skin disorders. In the present study methanolic extract of its leaves were investigated for its anthelmintic activity by the use of earthworms with different doses i.e., 25, 50, 100 mg /ml. It is showing a significant activity by comparing with the standard drug Albendazole. The dose dependent effects were observed with 25, 50, 100 mg/ml dose. The *Peltophorum pterocarpum* exhibit the similar chemical nature with that of the other species of Peltophorum by phytochemical screening of methanolic extract of leaves.

Keywords: *Peltophorumpterocarpum*, methanolic extract, Anthelmintic.

Chemical Pharmacology of Khat leaves

Venkateswara Reddy A*, Pradeep Kumar Y, Prasanthi G, Swarnalatha D, Gopinath C

Department of Pharmacology, Annamacharya college of Pharmacy, New Boyanapalli, Rajampet -516126, Y.S.R. Dist, A.P., India.

E-mail: gaibupeer1995@gmail.com

PPCO19

ABSTRACT

The leaves of khat (Catha edulis Forsk, belonging to the celastraceous family). are chewed as a social habit for the central stimulant action due to presence of cathinone as a main constituent. Khat leaves contain high proportions of alkaloids, vitamins, proteins and tannins in small amounts. Norephedrine & norpseudo ephedrine are responsible for its stimulant activity, which are metabolic products of cathinone. These are identified by analytical methods like gas chromatography. Khat leaves shows adverse effects on health mainly on heart, liver and CNS. It increases blood pressure which coincides with rising of cathinone levels in plasma and we observe the positive inotropic and chronotropic actions on heart by the cathinone which indirectly acts as a sympathomimetic amine. Sometimes it also shows negative inotropic action due to impaired coronary perfusion. It elevates the blood glucose levels by glycogenolysis in liver and skeletal muscles; a beta-2 adrenoceptor shows mediated response. khat/cathinone induces the release of dopamine from presynaptic storage sites and chronic administration of either the whole extract or cathinone (100 mg/kg) results in a significant depletion of dopamine in several brain areas, particularly on the nigrostriatal dopamine terminal projections. This is similar to the neurotoxic effect of chronic amphetamine. Secondary metabolites phenolic, flavonoid, and tannins like shows anti oxidant activity.

Key words: khat, cathinone, nor ephedrine, glycogenolysis.

Antitubercular activity of leaves of *Rhinacanthus nasutus* (l.)

Shuaib Ali Khan M*, Pradeep Kumar Y, Madhu M, Chand Basha S, Gopinath C

Department of Pharmacology, Annamacharya college of Pharmacy, New Boyanapalli, Rajampet -516126, Y.S.R. Dist, A.P., India.
E-mail: mayanashuaib18@gmail.com

PPCO20

ABSTRACT

The antitubercular effect of n-hexane ,chloroform, ethanol extracts was prepared from leaves of *Rhinacanthus nasutus* (k) was evaluated against Mycobacterium tuberculosis using Microplate Alamar Blue assay (MABA).The Minimum inhibitiory concentration was taken to assess antitubercular activity .The results showed that ethanolic extract have more significant antitubercular activity as compared to n-hexane, chloroform extracts. Pyrazinamide and Streptomycin is taken as standard drugs.

Keywords: *Rhinacanthus nasutus* (k), MIC, Antitubercular activity

Anthelmintic activity of Piperine from Black pepper

Rajagopal P*, Chand Basha S, Gopinath C

Department of Pharmacology, Annamacharya college of Pharmacy, New Boyanapalli, Rajampet -516126, Y.S.R. Dist, A.P., India.
E-mail: gopalraj422@gmail.com

PPCO21

ABSTRACT

Piperine is an alkaloid responsible for the pungency of black pepper & long pepper. The dried unripe fruits of Piper nigrum belong to the family Piperacae, it is well known for its reducing inflammation, improving digestion, and relieving pain and asthma. Traditionally it is claimed to be used in the house hold for carminative and aromatic. In present study different concentration of piperine 2.5 mg/ml, 5 mg/ml, 10 mg/ml were investigated for its anthelmentic activity. The result indicates that the 10 mg/ml piperineposses significant anthelmentic activity. The paralysis time [P] and death time [D] is comparable with standard Albendazole 20 mg/ml. Dose dependent effects were observed with 2.5 mg/ml, 5 mg/ml and 10 mg/ml.

Key words: Piperine, Anthelmentic activity, Albendazole

A review ONCREST Syndrome

Ramya Krishna P*, Sowjanya E, Devi K

Department of Pharmacology, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist, A.P., India.
E-mail: ramyaprudvi95@gmail.com

PPCO22

ABSTRACT

The main aim of this review article is to provide information about epidemiology, physiopathogenic mechanism and its treatment. Crest syndrome is also known as the limited cutaneous form of systemic sclerosis. It is multisystem connective tissue disorder which can affect all connective tissue i.e., joints, skin muscles, and blood vessels and therefore have

multiple effects on many different organs throughout body and it is generally classified as one of the autoimmune disease. Symptoms include white-blue-red transition, ulceration, amputation, gangrene, chest pain. Diagnosed by pulmonary function testing, chest radiography and electrocardiogram. It is treated by calcium channel blockers, Angiotensin - converting enzyme inhibitors and D-penicillamine etc. Early disease detection and therapeutic intervention is emphasized to prevent the potentially irreversible stage of the disease.

Keywords: Crest syndrome, autoimmune disease, amputation, gangrene.

A review on Pompe disease

PPCO23

Swathi M*

Department of Pharmacology, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist, A.P., India.

E-mail: swathimachavarapu8@gmail.com

ABSTRACT

Pompe disease (glycogen storage disease type II, acid maltase deficiency) is a progressive metabolic myopathy caused by deficiency of the lysosomal enzyme acid a glucosidase. This leads to an accumulation of glycogen in various tissues of the body, most notably in skeletal muscle. The disease has an autosomal recessive inheritance with a predicted frequency of 1,40.000. Pompe disease is a continuous spectrum but for clinical practice different subtypes are recognized. The classic infantile form of the disease occurs in infants (shortly after birth) and is characterized by generalized hypotonia, failure to thrive, and cardio respiratory failure. Patients usually die within the first year of life. The non-classic or late-onset form of the disease may occur at any age in childhood or adulthood. It presents predominantly as a slowly progressive proximal myopathy, with or without respiratory failure. ERT benefits are attenuated by antibody formation, which has led to interest in combining ERT with immune modulation. With an enzyme defect, carbohydrate metabolic pathways are blocked, and excess glycogen accumulates in affected tissues. The disease is caused by mutations in the gene that instructs the body to make an enzyme called acid alpha-glucosidase (GAA). Is absent or significantly reduced, causing excessive amounts of glycogen to accumulate in the body's tissues, which results in major damage. The heart and skeletal muscles are most affected.

Keywords: Pompe disease, lysosomal storage disorders, natural course, enzyme replacement therapy.

Autism spectrum disorder

PPCO24

LimiyaS*, Mahesh A

Department of Pharmacology, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist, A.P., India.

E-mail: Limiyashahul@gmail.com

ABSTRACT

Autism spectrum disorders (ASD) comprise a group of neuro developmental abnormalities that begin in early childhood and are characterized by impairment of social communication and behavioral problems including restricted interests and repetitive behaviors. There are different types of ASD like autistic disorder, child hood disintegrative disorder, Pervasive Developmental Disorder, Not Otherwise Specified, Rett syndrome, Asperser syndrome. It mainly caused due to genetically, immunologically and environmentally factors. Several genes have been implicated in the pathogenesis of ASD. Most of them are involved in neuronal synaptogenesis. Apart from this a number of environmental factors and associated conditions such as Gastrointestinal (GI) abnormalities, immune imbalances have been linked to the pathophysiology of ASD. ASD symptoms like loss of social skills, loss of bowel and bladder control, loss of motor skills. It diagnosed by patient centre care, screening and diagnostic technique and laboratory investigation. Risperidone, Aripiprazole, and Prozac are used to treatment of ASD. The present review gives an brief overview about Autism spectrum disorder, treatment and future directions.

Key Words: Autism Disorder, neuronal synaptogenesis, autistic disorder, rett syndrome

Newer diagnostic techniques in Cancer - A brief review

Divyasree B*, Premalatha S

Department of Pharmacology, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist, A.P., India.

Email: bdivyasree22@gmail.com

PPCO25

ABSTRACT

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other tissue. Cancer is a very devasting disease which destroys human both physically and mentally. Many sophisticated laboratory and imaging techniques have evolved in oncology over the tumors. Today many advanced treatments for cancer have been invented but many of them have disadvantages which often make them inefficient. Chemotherapy, radiation and Photo dynamic therapy are innovative approach for the treatment of a range of cancer and age related macular degeneration. A well advanced technique is Immuno histochemical panels which are used extensively. Cancer biomarkers constitute one of most rapidly advancing fields in clinical diagnostics used to screen asymptomatic individuals. Advanced sophisticated technique like Micro array, Mass spectrometry, Automated DNA sequencing, Cytogenetics and Analysis of DNA ploidy and Molecular genetics assay which have opened new avenues in field of cancer biomarkers.

Molecular techniques include Fluorescence insitu hybridization (FISH technique), Microarray analysis, Immunocytochemistry (ICH), Flow cytometry and Electron microscopy. This review helps in early diagnosis of cancer.

Key words: cancer, radiation, chemotheraphy, cancer biomarkers, FISH technique, ICH

A review on Eosinophilic Esophagitis

BenarjiT *, Devi K

PPCO26

Department of Pharmacology, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist, A.P., India.

E-mail: benarjit9@gmail.com

ABSTRACT

The main aim of this review article is to provide information about pathogenesis and management of Eosinophilic esophagitis. Eosinophilic esophagitis (EoE) is an atopic inflammatory disease of the esophagus that has become increasingly recognized in children and adults over the last decade. The disorder is sometimes referred to as "asthma of the esophagus" given that it shares many clinical and pathophysiologic characteristics with asthma . Eosinophilic esophagitis (EoE) is a clinicopathologic entity of increasing worldwide prevalence that affects both children and adults. EoE is a chronic, immune, antigen-mediated disorder with a pathogenesis akin to other allergic diseases such as asthma and eczema in which an antigen induces a cascade of Th2 interleukins (ILs) and chemokines in addition to inflammatory cell infiltration. Future studies are needed to better define the natural history of EE and to identify effective therapies for children and adults alike**.**

Keywords: Eosinophilic esophagitis, Dysphagia, Endoscopic dilation.

Zika virus

PPCO27

Kavya Sree V*, **Supriya M, Leena samhitha P, Mamatha P**

Department of Pharmacology, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist, A.P., India.

E-mail: Kavyasree.voleti@gmail.com

ABSTRACT

Zika virus, a flavi virus transmitted to humans by mosquitoes of genus Aedes. It is spread by day time active mosquitoes primarily by female *Aedesa egypti*. This was discovered in 1947 in the Zika forest in Uganda .This virus causes the infection Zika fever with symptoms like headache, fever, digestive troubles etc., The latest outbreaks confirmed that approximately 500 patients with Zika fever. Human Zika virus infection appears to have changed in character while expanding its geographical range. Prevention includes usage of mosquito repellants, medicine such as acetaminophen to reduce fever and pain. Out breaks linked with neurological disorders including guillan-barre syndrome and microcephaly. There is no specific vaccine for zika infection only prevention is possible. This review covers the symptoms, spread, and prevention of zika virus.

Key words: Microcephaly, *Aedes aegypti*

PHARMACOVIGILANCE: An Overview

Gnana Sindhu K*, **Gnatha G, Sri Chandana P, Vandana B**

Department of Pharmacology, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist, A.P., India.

E-mail: katurusindhu@gmail.com

PPCO28

ABSTRACT

The safety concern of drug is now becoming the priority area. The thalidomide tragedy of 1960's opened the eyes of drug regulators as well as other concern body to establish a way to ensure drug safety, previously the issues was drug safety issues in shadow. The drug safety issues were globalised, strengthen and systematized after the establishment of World Health Organisation (WHO) programmed for International drug monitoring in 1968. Every drug is associated with beneficial as well as undesirable or adverse effect.

Adverse drug reaction (ADR) is the common clinical problem. The hospitalization due to ADR's in some countries is about or more than 10%. In addition, it is estimates that 10-20% of the hospital inpatient suffers from ADR's. Appropriate and effective monitoring of ADR's, i.e. Pharmacovigilance, is the only best way to safe guard the public health. Spontaneous reporting system (SRS) is the first and most widely used method to report ADR's in spite of under reporting as a major limitation. It is enable to early detection of new, rare and serious ADR 's. Based on those reported cases signal is generated. Signal is new possible casual between a suspected ADR and drug; which is previously unknown or incompletely documented. In terms of ADR's reporting knowledge and attitudes and health professionals is strongly related. Under reporting can be significantly improved by appropriate educational intervention.

Key words: Adverse Drug Reaction, Pharmacovigilance, Signal, Spontaneous reporting system.

HANTA VIRUS

PPCO29

Munilakshmi N*, Rachana P, Sandhya B, Mamatha P

Department of Pharmacology, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist, A.P., India.

E-mail: munilakshmin30@gmail.com

ABSTRACT

Hanta viruses are single stranded, enveloped, negative sense RNA viruses in the Bunyaviridae family .They are transmitted from various rodent hosts by inhalation of infected urine, saliva or faeces. Infection in rodent hosts in apparent but persists for life person-to-person spread of hanta virus has not been described. Important clinical syndromes Hanta virus pulmonary syndrome (HPS) or Hanta virus cardio Pulmanary syndrome (HCPS), Haemorrhagic fever with renal syndrome (HFRS). Currently more than 30 gene types and 21 species of hanta viruses have been described. In general HFRS due to Hantaan viruses is more severe and has higher mortality. Hantaan is predominant in the far East (Korea, Japan, China), Perugia and Seoul. Symptoms include headache, fever and chills. Prevention is to wear gloves while sweeping the rodent faecal matter. Management of hanta virus infections may require bed rest, sedation, circulatory and ventilator support and renal dialysis. Ribavirin if administered early in the illness may be of benefit. This review focus on symptoms, spread, and prevention of Hanta virus.

Key words: Hantaan, Ribavirin

Protein array technology

Bharathi V*, Jyothsna C, Malleswari B, Rajeswari O

Department of Pharmacology, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist, A.P., India.

Email: bharathiv55@gmail.com

PPCO30

ABSTRACT

The human genome is sequenced but only a minority of genes have been assigned a function whole genome expression profiling is an important tool for functional genomic studies .Automated technology allows high through put gene activity monitoring by analysis of complex expression patterns, resulting in finger prints of diseased versus normal or developmentally distinct tissues .Differential gene expression can be most efficiently monitored by DNA hybridization on arrays of oligo nucleotides or c DNA clones .Starting

from high density filter membranes, cDNA microarrays have recently been devised in chip format. Microarrays can be used to go from an individual clone to a specific gene and its protein product .This protein array technology now a day has been potentially used in medical diagnostic purposes.

Keywords: C DNA clone, Microarrays , Oligonucleotides, DNA hybridization.

Role of Ethno medicine for drug development

Ravi S*, Pradeep Kumar Y, Chand Basha S , Gopinath C

Department of Pharmacology, Annamacharya college of Pharmacy, New Boyanapalli, Rajampet -516126, Y.S.R. Dist, A.P., India.

Email.ID: ravisomabattini@live.com

PPCO31

ABSTRACT

Ethno medicine refers to the study of traditional medical practice which is concerned with the cultural interpretation of health, diseases and illness and also addresses the healthcare seeking process and healing practices. Throughout history humans have manipulated their natural environment for an increased predictability and availability of plant and animal resources. Research on prehistoric diets increasingly includes small game, but edible insects receive minimal attention. The main objective of the present review is to describe the importance of ethno medicine for the treatment of disease without side effects. These manipulations improve insect exploitation by increasing their predictability and availability, and most likely have an ancient origin.

Keywords: Edible insect; entomophagy; facilitation; environmental manipulation; semi-cultivation.

Role of red wine in prevention of various diseases

Ashok S*, Mallikarjuna Rao K, Pradeep Kuamar Y, Chand Basha S, Gopinath C

Department of Pharmacology, Annamacharya college of Pharmacy, New Boyanapalli, Rajampet -516126, Y.S.R. Dist, A.P., India.

E-Mail: sanisettyashok@gmail.com

PPCO32

ABSTRACT

The importance of red wine to health has been at established. The consumption of 1 to 2 glasses daily reduces mortality by preventing coronary heart disease. It contains antioxidant resveratrol. It is generally found in grape seed and skin. It is used to prevent cancer. Resveratrol has anti carcinogenic properties. It shows their action mainly by minimizing the DNA mutation that causes cancer, killing the diseased cells and blocking the creation of blood vessels that nurture it. The healthy ingredient in red wine stops the breast cancer cells from growing by blocking the growth effect of estrogen by hormonal therapy. The resveratrol is able to counteract the malignant progression since it inhibits proliferation of resisistant breast cancer cells. The goal of study was to see if red wine results in changes in hormonal pattern as measure during the follicular and luteal phases of three menstrual periods. Red wine also help full in thinning the blood cells and treatment of CVS diseases.

Keywords: Redwine, Coronary heart disease, Antioxidant.

Synthesis and antibacterial activity of 2-(4-nitro phenyl)-5- aryl-1, 3, 4-Oxadiazole analogues

Gaibupeer K*,ChandBasha S, Madhu M, Pradeep Kumar Y, Gopinath C

Department of Pharmaceutical Chemistry, Annamacharya college of Pharmacy, New Boyanapalli, Rajampet - 516126, Y.S.R. Dist, A.P., India.

E-mail: mpavankumarjilla@gmail.com

PPCH01

ABSTRACT

Novel 2-(4-Nitro Phenyl)-5-Aryl-1, 3, 4-Oxadiazole Analogues" (4a-g) are synthesized, characterized by the IR spectra and screened for Antimicrobial activity by Agar diffusion method. The synthetic route involves the 4-Nitro benzoic acid was dissolved in excess of ethanol the reaction mixture was acidified and neutralized with sodium bicarbonate to obtain Ethyl-4-nitro benzoate. Equimolar mixture of Ethyl-4-Nitrobenzoate and Hydrazine hydrate was refluxed for 12 hr to obtain 4-Nitro benzohydrazide. The yields of different synthesized compounds were found to be in the range of 60-85%. Characteristic IR spectra show several functional groups. Seven derivatives were prepared, identified and screened for antibacterial activity, among synthesized compounds 4b & 4f shown equipotent activity that is MIC-600µg and zone of inhibition of 3mm respectively however 4a show MIC 400 µg and zone of inhibition is 3mm against gram–ve E.coli but none of the compounds shown potent antibacterial activity than standard Amoxicillin. All the three compounds were also screened for antibacterial activity against gram + ve S. aureus the result reveled that 4a posse's greater activity when compared to 4b & 4f respectively, but however the MIC and zone of inhibition of 3mm the compounds shown lesser antibacterial activity than standard Amoxicillin.

Key words: Oxadiazoles, Antimicrobial activity, gram –Ve E.coli.

Combinatorial chemistry: *A source of molecular diversity*

Hareesh Y*, Yagnasai B, Harikrishna N, Balasubramanyam A, Soujanya M

Department of Pharmacuetical Chemistry, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist, A.P., India.

Email: yeleswaramhareesh@gmail.com

PPCH02

ABSTRACT

Combinatorial chemistry is one of the new technique developed in pharmaceutical industries to reduce the time and cost associated with producing effective and competitive drugs. Combinatorial chemistry is a new technique developed in pharmaceutical industry, which involves the synthesis of compounds as libraries, which are screened as a whole mixture for particular biological activity. Because of the rapid synthesis of compounds, this method saves the time and cost associated with the drug discovery. Libraries of the compounds are synthesized by using different approaches, among those SOLID PHASE, SOLVENT PHASE techniques are beneficial compared to other techniques. By considering these all these aspects it is under stable that this method will definitely become helpful in the development of new drug molecules at lower price.

Keywords: Combinatorial technique, Drug design, Compound libraries, Solid phase technique.

HYDRAZONES: *A versatile molecule*

PPCH03

Siva Prasad Y*, Soujanya M
Department of Pharmacuetical Chemistry, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist, A.P., India.
E-mail: sivaprasadyachamaneni3@gmail.com

ABSTRACT

Hydrazones are the important class of organic compounds characterized by the tri atomic grouping of R-C=N-N-RI. They are distinguished from other members of the presents of two interlinked nitrogen atoms and attaching group with potential donar site (c-o)make the molecule more stable by proper delocalization, called as acyl hydrazones (R-C=N-N-CO RI)responsible for wide range of biological activity. Extensive studies reveals that the lone pair of electrons on trigonally hybridized nitrogen atom of the hydrazone is responsible for the chemical and biological activities ranging from antimicrobial, anti tumor, anti inflammatory, anti nonciceptive activities etc. Advancements in the field of drug discovery process no of options are available for the synthesis of lead molecule (hydrazones) includes green chemistry, microwave technique, ultra sonification etc. Advantages with hydrazones are their method of preparation is easier, rapidly crystallized, easily isolate, purity is high and suitable at room temperature and all these properties make the hydrazones as versatile molecule in present era.

Key Words: Hydrazones, Azomethine, drug design, lead molecule

Insilico and invitro screening of n-(substituted benzylidene)-2-(benzamido)-3-(p-hydroxy, 3- methoxy)- phenyl-acrylohydrazide for antioxidant activity

PPCH04

Soujanya M*[1], Rajitha G[2]

[1]Research Scholar, Sri Padmavathi Mahila Viswavidyalayam, Mahila university Tirupati, 517501, A.P, India.
[2]Professor, Department of Pharmaceutical chemistry, Sri Padmavathi Mahila Viswavidyalayam, Mahila university, Tirupati, 517501, A.P, India.
E-mail: soujipharma@gmail.com

ABSTRACT

A series of novel of n-(substituted benzylidene)-2-(benzamido)-3-(p-hydroxy, 3-methoxy)-phenyl-acrylohydrazide (1-8) were synthesized and screened for anti-inflammatory activity by rat paw oedema model using indomethacin as standard drug. Among all compounds 6, 4, 5 exhibited good activity compared to standard and remaining all compounds showed moderate activity. All the above results were supported by insilico studies using *OCHEMsoft* and the drug likeness score, bioactive scores of the compounds were predicted by using *MOLsoft*.

Keywords: acrylohydrazides, antiinflammatory activity, diclofenac.

Pharmacological significance of Quinoline derivatieves as microbial agents: A review

Thulasiram K*,ViswanathV, Mohith K, Bhanuprakash A

Department of Pharmacuetical Chemistry, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist, A.P., India.

Email: chanti.mohith@gmail.com

PPCH05

ABSTRACT

Microbial infections are one of the leading diseases. Which are responsible for millions of deaths every year because of lack of effective anti microbial therapy and this situation because more complicated because of microbial resistance towards conventional antibiotics. The quinoline is nucleus is a ubiquitous heterocyclic structural motify that is found in many naturally occurring quinoline alkaloid, therapeutic and synthetic compound with a wide spectrum of biological activities such as anti malarial, anti inflammatory, anti bacterial, anthelmenthic, anti viral, anti diabetic, anti asthmatic and anti cancer activities etc. This review deals with the anti microbial potential of few novel quinoline derivatives as an effort to provide better treatment for the microbial infections.

Keywords: Quinoline, anti microbial, anti bacterial, anti fungal, anti cancer, anti diabetic.

Synthesis of multi-substituted Oxazole analogs and their potential biological activities – A review

Nagasaalini P*, **Srivennela N, Aruna V, Mahalakshmi D, Siva Kumar P**

Department of Pharmacuetical Chemistry, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist, A.P., India.

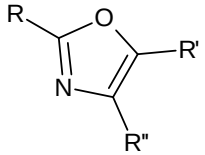
E-mail: saalini.palapati@gmail.com

PPCH06

ABSTRACT

Oxazole are five membered heterocyclic compounds 1st position nitrogen and 3rd position oxygen atom. Its azole analog of furan it's more stable heterocyclic aromatic compound. It acts as important pharmacophore found in drugs or molecules have biologically active and potential therapeutic molecules like anti-inflammatory, anti-oxidant, anti-cancer, anthelmithic, anti-bacterial and anti-fungal activities it were synthesized by highly functionalized multi-substituted asymmetric and symmetric oxazole were concisely in different moderate methods to good yields via multi component reacts (MCRs) of sub-aniline, alpha acyl amino ketones, amide and aldehyde. The merits of these methods include the environmentally friendly reaction condition, simple reaction brought substrate and satisfied yields.

Key words: Azole analogs, Aromatic compound, Anti-inflammation, Anti-cancer, Alpha acyl amino ketones.



Substituted Oxazole

Formulation and development of dental gel containing Clove oil for the treatment of human periodontal diseases

Vijaya Kumar V*, Sana Banu SK, Chandana K, Sathish P, Charan Kumar Y

Department of Pharmaceutics, Rao's College of Pharmacy, Chemudugunta (P), Venkatachalam (M), SPSR Nellore-524320, Nellore, A.P, India.

E-mail: vijay66vvk@rediffmail.com

PPCE01

ABSTRACT

The study was aimed to develop and evaluate dental gel containing clove oil as the chief constituent for the treatment of periodontitis. It has a wide spectrum of antibacterial activity against a number of periodontal pathogens, hence it is selected for the treatment of periodontitis. Clove oil gel is formulated by using carbopol 934(gelling agent), clove oil(medicinal agent), polyethylene glycol(co-solvent), methyl paraben (preservative), propyl paraben (preservative) and required quantity of distilled water(vehicle). The prepared gel was evaluated for various properties such as antimicrobial activity, pH, spreadability, extrudability, drug content etc. In- vitro experiments demonstrated that the formulation F3 is a suitable dosage form for the treatment of periodontitis. It showed the zone of inhibition of about 22.05±0.04 mm.

Keywords: Clove oil, Carbopol 934, Periodontitis, Anti microbial activity

Effect of Ascorbic acid on dissolution stability of Rifampicin in fixed dose combination products

Subashini R*, Nidhina R, Abirami M, Arun Alphons Thomas

Swamy Vivekanandha College of Pharmacy, Elayampalayam, Thiruchengode - 637205 Namakkal, Tamilnadu, India

E-mail: subababu.r@gmail.com

PPCE02

ABSTRACT

Degradation of Rifampicin (RIF) in the stomach (acid) medium from fixed dose combination (FDC) products in a major concern which leads to reduction in the bioavailability of RIF and is further influenced by the presence of Isoniazid (INH) in the stomach after ingestion. Previous studies reveal that addition of Ascorbic acid (ASC) in dissolution medium and also in plasma as antioxidant to stabilize RIF from degradation. The present study aimed to investigate the effect of ASC with various concentrations on dissolution stability of RIF and other fixed dose combination products such as Isoniazid(INH), Ethambutol (ETH) and Pyrazinamide (PYZ) by high performance liquid chromatography method (HPLC). The study was performed for percent in vitro dissolution stability study of RIF, percent degradation of RIF, percent formation of 3-Formyl rifamycin SV (3-FRSV) in the presence and absence of ASC in fixed dose combination products. The observed results indicate that co-package of ASC with fixed dose combination products (FDC) can protect RIF degradation in the acidic environment and thus improve bioavailability of RIF in FDC products.

Keywords: Rifampicin, Isoniazid, Ethambutol, Pyrazinamide, ASC, 3-FRSV, Fixed dose combination (FDC), HPLC.

Nano robot for brain aneurysm

Indraja G*, Jegannath S, Srinivas Rao GH

Department of Pharmacology, Saastra College of Pharmaceutical Education & Research, Nellore– 524311, A.P, India.

Email: indira.niraja040@gmail.com

PPCE03

ABSTRACT

In this abstract I present how nano electronics should advance medicine providing details on the teleoperated techniques and equipment design methodology necessary for the effective development of nanorobots. The platform architecture describes how to use a nanorobot for intracranial prognosis, and shows how it should be integrated for medical instrumentation. Furthermore, the current study establishes proteomics nano bioelectronics, and electromagnetics as the basis to advance medical nano robotics. To illustrate the proposed approach, the nano robots must search for protein over expression signals in order to recognize initial stages of aneurysm. An advanced nano mechatromics simulator, using a three-dimensional task-based environment, is implemented to provide an effective tool for device prototyping and medical instrumentation analysis. Thus, based on clinical data and nano bioelectronics, the proposed model offers details about how a nano robot should help with the early detection of cerebral aneurysm.

Key words: Nanorobots, Bioelectronics, Electromagnetics.

Design and evaluation of mouth dissolving tablets of Baclofen by processed super disintegrants

PPCE04

Swathi Krishna KV*[1], Chandra Sekhar KB[2]

[1]*Department of Pharmacuetics, Saastra College of Pharmaceutical Education & Research, Nellore– 524311, A.P, India.*

[2]*Oil Technological Research Institute, JNTUA, Ananthapuramu-515001, A.P, India.*

E-mail: swathikrishna004@gmail.com

ABSTRACT

Fast dissolving drug delivery systems have received ever increasing demand during the last decade and the field has become a rapid growing area since they have better patient compliance and offers improved biopharmaceutical properties, improved efficacy and better safety, easy administration and serves as the first choice of dosage form for paediatrics, geriatrics, mentally challenged and travelling patients as these are designed to dissolve rapidly in the saliva without the need for water compared to conventional dosage forms. . The objective of the present work is to evaluate fast dissolving tablets of baclofen prepared by direct compression technique using super disintegrants like polyplasdone, pregelatinized starch, kollidon CL and to modify dissolution rate and improve the bioavailability. The physical parameters like bulk density, tapped density, angle of repose, Carr's index, Hausner's ratio were evaluated. Post compression parameters like weight variation test, hardness, friability, drug uniformity, moisture uptake studies, invitro studies were evaluated and the values were found to be within the limits. Formulation F8 was the optimized formulation having least disintegration time of 13.54 ± 0.034 seconds and other parameters were in acceptable range. The percentage drug content of all the tablets were found to be 97.12 ± 0.28% and 98.87 ± 0.62% of baclofen, which were within acceptable limits. The effectiveness of the super-disintegrants were in the order of polyplasdone > kollidon CL > pregelatinized starch.

Keywords: Mouth dissolving tablets, Super disintegrants, Baclofen, In-vitro release.

Enhancement of dissolution rate of Mefenamic acid using solid dispersion techniques.

PPCE05

Gomathi M*, Sutha P, Sangameswaran B

Department of Pharmaceutics, SSM College of Pharmacy, Jambai, Bhavani, Erode, Tamilnadu, India.

E-mail: gomathidurga24@gmail.com

ABSTRACT

Aim: The main objective of this study was to prepare and evaluate solid dispersion of mefenamic acid, to enhance the dissolution rate, solubility & bioavailability.

Method: Mefenamic acid solid dispersion was prepared using Poly Vinyl Pyrrolidone (PVP K 30) and Poly Ethylene Glycol (PEG 4000) as hydrophilic carriers by solvent evaporation and kneading techniques. And the solid dispersion formulations were evaluated for micromeritic studies, Fourier transform infra-red (FTIR) spectroscopy, percentage practical yield, drug content, wettability and *in vitro* drug release studies.

Results: FTIR studies showed that there was no interaction between the drug and polymer. The prepared Solid dispersion KM3(1:3) using PVP K30 showed minimal wetting time of 14 seconds compared with the other formulations. *In vitro* release studies in Phosphate buffer pH of 7.4 revealed that the solid dispersions prepared by kneading method showed faster drug release compared with solvent evaporation method. So, the dissolution profile of solid dispersion containing PVP K30 (1:3) by kneading method was selected as the best formulation because of its faster drug release among all formulations.

Conclusion: The development of solid dispersion of mefenamic acid could be a promising approach to enhance its dissolution rate, solubility and bioavailability.

Key words: Solid dispersion, Mefenamic acid, PVP K30, PEG4000.

Enhanced antidiabetic effects of metformin loaded chitoson nanoparticles in l6 myotubes: *Invitro*

Santhosh Kumar C[1], Karthikeyan D*[1], Venkata Radha Gadela[2]

[1]*Department of Pharmaceutics, Srikrupa Institute of Pharmaceutical Sciences, Vill: Velikatta, Mdl: Kondapak, RD: Siddipet, Dist: Medak-502277, Telungana state, India.*

[2]*Department of Pharmaceutics, GITAM University, Rushikonda, Visakapatnam-530045, Andhra Pradesh, India.*

E-mail: skredmind7@gmail.com

PPCE06

ABSTRACT

Aim: In this present study aimed to formulate and evaluate metformin loaded chitosan (CSM) nanoparticles (NPs) with sustained action for NIDDM (Non-Insulin Dependent Diabetes Mellitus)

Methods: These nanoparticles have been developed by ionic gelation technique and were subjected to various studies including photon correlation spectroscopy (PCS), scanning electron microscopy (SEM) and zeta potential. The *in vitro* hemolysis assay, SDS-PAGE test of nanoparticle stability and glucose uptake studies were performed with nanoparticles.

Results: The mean particle diameter of optimized formulation was 541.2 nm and had spherical morphology and stable nature. Moreover, these particles were subjected to Fourier transform infrared spectroscopy (FTIR) for compatibility analysis between drug and polymer. The results were positive and showed that, there were no interaction between drug and polymer. The optimized formulation demonstrated favorable *in vitro* prolonged release characteristics. In addition, the CSM nanoparticles were reasonably stable in the presence of excess bovine serum albumin, which suggested that the nanoparticles may also be stable in

the blood stream. The percentage of hemolysis induced by metformin and placebo CSNPs were less than 5%. The results indicated that the CSMNPs are hemocompatible and therefore is safe for oral administration. The glucose uptake significantly increased in L6 skeleton muscle cell line.

Conclusion: Hence, the designed nanoparticle system could possibly be advantageous in terms of prolonged release, to achieve reduced dose frequency and improve patient compliance.

Keywords: Chitosan, Metformin. Nanoparticle, L6 skeleton muscle

Role of Neutraceuticals in health care system

BhargavKalyan P*, MallikarjunaRao K, PradeepKuamar Y, Chand Basha S, Gopinath C

Department of Pharmaceutics, Annamacharya college of Pharmacy, New Boyanapalli, Rajampet -516126, Y.S.R. Dist, A.P., India.

E-Mail: bhargavkalyan0009@gmail.com

PPCE07

ABSTRACT

Nutraceuticals, a term combining the words "nutrition" and "pharmaceutical", is a food or food product that provides health and medical benefits, including the prevention and treatment of disease. Nutraceuticals are available in the form of isolated nutrients, dietary supplements and specific diets to genetically engineered foods, herbal products and processed foods such as cereals, soups and beverages. Nutraceuticals provide all the essential substances that should be present in a healthy diet for the human. Nutraceuticals provides energy and nutrient supplements to body, which are required for maintaining optimal health. Nutraceuticals are widely used in the food and pharmaceutical industries. Some Nutraceuticals are useful in maintaining healthy prostate function, remedy for restlessness and insomnia. Nutraceuticals, such as glucosamine and chondroitin sulfate, offer possible chondro-protective effects against joint injury.

Keywords: Nutraceuticals, Glucosamine and chondroitin sulfate

Oral therapy of Insulin

Yuva Nandini P*, Harika V, Kameswari, Roja Ramani D

Department of Pharmacuetics, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist, A.P., India.

E-mail: nandiniyuva12@gmail.com

PPCE08

ABSTRACT

Oral delivery of insulin may significantly improve the quality of life of diabetes patients who routinely receive insulin by subcutaneous route. Infact, compared with this administration route, oral delivery of insulin in diabetes treatment offers many advantages: higher patience compliance, rapid hepatic insulinization, and avoidance of pheripheral hyper insulinemia and other adverse effects such as possible hypoglycemia and weight gain. However, the oral delivery of insulin remains a challenge because its oral absorption is limited. The main barrier faced by GIT is degradation by proteolytic enzymes and lack of transport across the intestinal epithelium. Several strategies to deliver insulin orally have been proposed, without much clinical or commercial success. In this review, different drug delivery systems intended to increase the oral bioavailability of insulin will be discussed with a special focus on nano particulate carrier systems, as well as the efforts that

pharmaceutical companies are making to bring to the market the first oral delivery system of insulin. The toxicological and safety data of delivery systems, the clinical value and progress of oral insulin delivery, and the future prospects in this research field will also be scrutinized.

Keywords: Hypoglycemic effect, Insulin, Nano particles, oral delivery system

Smart Insulin patch

PPCE09

Kavya M*, Aparna K, Likhitha Y, Asha Priya S

Department of Pharmacuetics, Gokula Krishna College of Pharmacy, Sullurpet-524121, SPSR Nellore Dist, A.P., India.

E-Mail: kavya.m267@gmail.com

ABSTRACT

Diabetes affects more than 387 million people worldwide, and that number is expected to grow to 592 million by the year 2035. Most transplants for diabetes are rejected, and many of the medications used to suppress the immune system wind up interfering with the activity of beta cells and insulin. “SMART INSULIN PATCH” that can detect increases in blood sugar levels and secrete doses of insulin into the bloodstream whenever needed. This minimally-invasive patch is filled with natural beta cells, biocompatible polymeric cells that sense the body’s glucose signals and respond by secreting doses of insulin to control blood glucose levels, with no risk of inducing hypoglycaemia, This new, painless patch is smaller than a postage stamp is covered on one side with an array of 400 microneedles—each only 800 μm in length. The microneedles are composed of hyaluronic acid and packed with thousands of pancreatic beta cells and glucose-signal amplifiers. These smart insulin approaches are exciting because they hold the promise of giving patients some time off with regards to their diabetes self-care.

Keywords: Biocompatible polymeric cells, insulin

REGULATORY AGENCY OF INDIA; CDSCO

PPCE10

***Muni Kumar U** *, Prasannakumar Y, Charanteja reddy Y, Kiran P, Poorna Chandra V*

Gokula Krishna College Of Pharmacy , Sullerpet-524121, SPSR Nellore dt , A.P., India

Email:munibaba143@gmail.com

At the beginning of 21st century, increased levels of terrorist activities and a higher incidence of medicine borne illness made regulation and protection of medicine supply is a worldwide concern. Regulatory agencies and organizations play a vital role to meet the requirements of legal procedures related to drug development process in a country. Every country has its own regulatory authority which is responsible to enforce the rules and regulations and issue the guidelines to regulate drug development processing, licensing, registrations, manufacturing, marketing and labeling of pharmaceutical products. The major

challenge of regulatory agencies and organizations around the world, is to ensure the safety, quality and efficacy of medicals and medical devices. This review explains about current structure of regulatory affairs and professionals to provide the current needs of industries for the global competition.

SHORT REVIEW – EMULGEL

PPCE11

Eugine Leo Prakash S*, Sangameswaran B

SSM College of Pharmacy, Chininyampalayam, Jambai, Erode, Tamilnadu, India

Application of drug incorporated formulation to the skin to directly treat skin disorder is called topical delivery system. Topical application of therapeutic agents offers various advantages over the other route of administration. It is an attractive route for local and systemic application of drug to treat various complications. Gels are providing faster drug release compared with other topical drug delivery. The major limitation of gel is delivery of hydrophobic drugs. It can be overcome by Emulgels. Emulgels are emulsion either oil in water or water in oil type which are incorporated in to gelling agent. Emulgel can provide local concentration of drug in the affected area. Emulgel is more effective than regular gel in curative aspects, and permeation depth of drug in emulgel is more. It is used as a vehicle to deliver various drug to the skin. Drug delivery can be enhanced by the use of permeation enhancers in emugel. Emulgel allow dual control of the drug release from the formulation, i.e. emulsion and gel. They have advantages of both emulsion and gels, hence it has higher patient acceptability. Emulgels have properties like thixotropic, greaseless, easily spreadable, easily removable, emolient, non staining, long shelf life, bio-friendly, transparent and pleasing appearance. Hence it can be used as better topical drug delivery system over present systems.

Keywords: Topical delivery, emulgel, gelling agent

NANO-ROBOTICS FOR CHEMOTHERAPY

AbdulHafeez S*,MallikarjunaRao K, PradeepKuamar Y, Chand Basha S, Gopinath C

PPCE12

Annamacharya college of Pharmacy, New Boyanapalli, Rajampet, Y.S.R. Dist. - 516126, A.P., India

Email:hafeezabdul7866@gmail.com

Nano robotics is the emerging technology field creating machines or robots whose components are at or close to the scale of a nanometer. Nano robotics refers to the nanotechnology engineering discipline of designing and building Nano robots, with devices ranging in size from 0.1-10 micrometers and constructed of Nano scale or molecular components. The names Nanobots, Nanoids, Nanites, Nano machines or Nanomites have also been used to describe these devices. The main objective of the present work is to describe the

importance of nanorobotics for chemotherapy. The first useful applications of nanomachines might be in medical technology, which could be used to identify and destroy cancer cells. Nanorobots are also applicable in the detection of toxic chemicals, and the measurement of their concentrations, in the environment. . Such devices are more related to Microscopy or Scanning probe microscopy, instead of the description of nanorobots as molecular machine. Macro scale robots or micro robots that can move with nanoscale precision can also be considered nanorobots. Potential applications for Nano robotics in medicine include early diagnosis and targeted drug-delivery for cancer. Nanotechnology provides a wide range of new technologies for developing customized solutions that optimize the delivery of pharmaceutical products. These RNA strands are attracted to cancercells. When the nanoparticle encounters a cancer cell, it adheres to it, and releases the drug into the cancer cell. This directed method of drug delivery has great potential for treating cancer patients while avoiding negative effects.

Keywords: Nanorobotics, nanomachines, microscopy.

PULSATILE DRUG DELIVERY SYSTEMS

Venkatesh N*,MallikarjunaRao K, Chand Basha S, Gopinath C

PPCE13

Annamacharya college of Pharmacy, New Boyanapalli, Rajampet, Y.S.R. Dist. - 516126, A.P., India

Traditionally, drugs are released in an immediate or extended fashion. However, in recent years, pulsatile drug release systems are gaining growing interest. A pulsatile drug release, where the drug is released rapidly after a well defined lag-time, could be advantageous for many drugs or therapies. Pulsatile release systems can be classified in multiple-pulse and single-pulse systems. A popular class of single-pulse systems is that of rupturable dosage forms. Other systems consist of a drug-containing core, covered by a swelling layer and an outer insoluble, but semi permeable polymer coating or membrane. The lag time prior to the rupture is mainly controlled by: (i) the permeation and mechanical properties of the polymer coating and (ii) the swelling behavior of the swelling layer. As is frequently found in the living body, many vital functions are regulated by pulsed or transient release of bioactive substances at a specific site and time. Thus it is important to develop new drug delivery systems to achieve pulsed delivery of a certain amount of drugs in order to mimic the function of the living systems, while minimizing undesired side effects. Special attention has been given to the thermally responsive poly (*N*-isopropylacrylamide) and its derivative hydrogels. Thermal stimuli-regulated pulsed drug release is established through the design of drug delivery devices, hydrogels, and micelles. Therefore Pulsatile drug delivery is one such systems that, by delivering drug at the right time, right place and in right amounts, holds good promises of benefit to the patients suffering from chronic problems like arthritis, asthma, hypertension

Keywords: Pulsetile drug release, Swelling layer, Arthritis, Asthma.

ROLE OF NATURAL POLYMERS IN FORMULATION OF FAST DISSOLVING TABLETS

PPCE14

Dharma Teja B *, Vijaya Kumar V,Ravi M

Rao's college of pharmacy, Nellore

Fast dissolving tablet are the novel dosage form which is well accepted now a days by geriatric and pediatric patients as it does not require water to swallow. The aim of the present work is to study the natural polymers used in fast dissolving tablets. Natural polymers like Mangifera indica gum, Hibiscus rosa sinenses mucilage, dehydrated banana powder, orange peel pectin, Locust bean gum, improve the properties of tablet and used as binder, diluent, superdisintegrant, increase the solubility of poorly water soluble drug, decrease the disintegration time and provide nutritional supplement simultaneously . Natural polymers are obtained easily from the natural sources and they are cost effective, non-toxic, biodegradable, and eco-friendly, devoid of any side effect, renewable and also provide Biocompatible. It is proved from the studies that natural polymers are more safe and effective than the synthetic polymers.Past studies revealed that natural polymers were exhibit good physicochemical characteristics, hence these are most acceptable excipients than others in the pharmaceutical industry to have a feasible dosage form in near future.

Keywords: Oral disintegrating tablets, Natural Super disintigrants, evaluation parameters

DIFFERENCE BETWEEN HPLC AND UPLC

PPAA01

SandeshD*, Sadik basha SK, SrujanKumar E,Sambasivarao R, Ranjith kumar R

Gokula Krishna College of pharmacy Sullurpeta 524121, SPSR Nellore, A.P, India.

UPLC is an advanced technique of HPLC and can be easily understood if we know HPLC. HPLC stands for high performance liquid chromatography is a technique used to separate different constituents of a compound. It is the most widely used technique to identify, quantify and separate components of a mixture. It uses high pressure to push solvents through the column. HPLC is widely used in biochemistry and separation and identification of amino acids, nucleic acids, proteins, hydrocarbons, pesticides, carbohydrates, antibiotics, steroids and other inorganic substances. Ultra high performance liquid chromatography, particle sizes less than 2um can be used. This allows for better separation of particle size of 5um that are used in HPLC. The pump pressure in HPLC is 40Mpa, (400 atmospheres) column can be used gradient C18, in UPLC this pressure can go up to 100Mpa, Column can be second generation bridged ethane hybrid (BEH) ACQUTTY BEH C18, Mechanical stability by bridging the methyl groups in the silica matrix. column diameters used in HPLC (3.0 to 4.6 mm), a consequence of frictional heating is the loss of performance due to temperature induced non uniform flow .To minimize the effects of frictional heating, smaller diameter columns (1-2.1 mm) are typically used for UPLC. Significant advance in instrumentation and column technology were made to achieve dramatic change in high flow rates for increased speed with superior resolution and

sensitivity. So this UPLC technique is very exciting and efficient.This review to know advance chromatography technology for better separation of compound in pharmaceutical analysis.

Key words: HPLC, UPLC, BEH

ANALYTICAL METHOD DEVELOPMENT AND VALIDATIONBY RP-HPLC METHOD IN BULK AND TABLET DOSAGE FORMOF TACROLIMUS AND GUGGULSTERONE

PPAA02

[1]Sonalika P[*], [2]Ramesh D

[1]IV Year B.Pharmacy, Ratnam institute of Pharmacy, Pidathapolur, Nellore, A.P, India.
[2]Associate Professor, Department of Pharmaceutical Chemistry, Ratnam institute of Pharmacy, Pidathapolur-524346, Nellore, A.P, India.

High performance liquid chromatography is at present one of the most sophisticated tool of the analysis. The estimation of tacrolimus and guggulsterone was done by RP-HPLC.Present work is aimed to develop a new, simple, fast, rapid, accurate, efficient and reproducible RP-HPLC method for the simultaneous analysis of Tacrolimus and guggulsterone. The Phosphate buffer was p^H3.0 and the mobile phase was optimized with consists of Methanol: Phosphate buffer mixed in the ratio of 70:30 % v/ v. symmetry C_{18} column C18 (4.6 x 150mm, 5µm) or equivalent chemically bonded to porous silica particles was used as stationary phase. The detection was carried out using UV detector at 256 nm. The solutions were chromatographed at a constant flow rate of 0.8 ml/min. the linearity range of tacrolimus and guggulsterone were found to be from 10-50µg/mlof tacrolimus and 60-300 µg/ml of guggulsterone. Linear regression coefficient was not more than 0.999.The values of % RSD are less than 2% indicating accuracy and precision of the method. The percentage recovery varies from 98-102% oftacrolimus and guggulsterone .LOD and LOQ were found to be within limit.

Keywords: Tacrolimus and guggulsteron,RP-HPLC,symmetry C18 column.

HPTLC: A POWERFUL ANALYTICAL TECHNIQUE IN PLANT DRUG DISCOVERY

PPAA03

Manish Sharma[*1,] Darshan D[2,] Kamlesh D[2]

[1]Mahakal Institute of Pharmaceutical Studies, Ujjain-456010, M.P, India.

[2]Institute of Pharmacy, Vikram University, Ujjain-456010, M.P, India.

Analysis of pharmaceutical and natural compounds and newer drugs is commonly used in all the stages of drug discovery and development process. High-performance thin layer chromatography is one of the sophisticated instrumental techniques based on the full capabilities of thin layer chromatography. The advantages of automation, scanning, full

optimization, selective detection principle, minimum sample preparation, hyphenation, and so on enable it to be a powerful analytical tool for chromatographic information of complex mixtures of pharmaceuticals, natural products, clinical samples, food stuffs, and so on.

Keywords: HPTLC, analytical tool etc.

SIMULTANEOUS ESTIMATION OF ATORVASTATIN CALCIUM, ASPIRIN, RAMIPRIL AND METOPROLOL TARTRATE IN BULK AND IN ITS CAPSULE FORMULATION BY FIRST ORDER DERIVATIVE SPECTROPHOTOMETRY

Anandakumar K *, AnandaThangadurai S, Jambulingam M and Kamalakannan D

Department of Pharmaceutical Analysis,Swamy Vivekanandha College of Pharmacy, Elayampalayam, Tiruchengode,Namakkal – 637 205, Tamil Nadu.

Email: anandkarunakaran@gmail.com.

PPAA04

The use of first order derivative spectrophotometry allowed simultaneous estimation of Atorvastatin Calcium, Aspirin, Ramipril and Metoprolol tartrate in fixed dose combination products. The absorbance values at 291.5 nm, 247 nm, 242.5 nm and 229.5 nm of first order derivative spectrum was used for the estimation of Atorvastatin Calcium, Aspirin, Ramipril and Metoprolol Tartrate, respectively without mutual interference. This method obeyed Beer's law in the concentration of 3 – 21 µg/ ml, 10 – 70 µg/ ml, 10 – 70 µg/ ml and 10 – 70 µg/ ml of Atorvastatin Calcium, Aspirin, Ramipril and Metoprolol Tartrate, respectively. A t-test indicated that calibration graphs were adequately linear at the evaluated concentration range. The results of analysis have been validated statistically and recovery studies confirmed the accuracy of the proposed method.

Keywords*:* Atorvastatin Calcium, Aspirin, Ramipril, Metoprolol Tartrate, Methanol and First derivative Spectrophotometry.

METHOD DEVELOPMENT AND VALIDATION OF FORCED DEGRADATION STUDIES OF CARVEDILOL BY USING UV SPECTROSCOPY

PPAA05

Kamala kannan.D*,Ananda Thangadurai.S, Anandha Kumar.K and Jambulingam.M

Department of Pharmaceutical Analysis, Swamy Vivekanandha College of Pharmacy, Tiruchengode, Namakkal (Dt)-637205, Tamil Nadu, India.

The present study deals with an method development and validation of forced degradation studies of Carvedilol, in bulk and pharmaceutical dosage form by using UV spectroscopy .Carvedilol is a Non selective beta blocker/alpha- 1 blocker and is a beta-adrenergic receptor blocking ability decreases the heart rate, myocardial contractility, and myocardial oxygen demand and also decreases systemic vascular resistance via its alpha adrenergic receptor blocking properties.The present research work describes simple, rapid UV- Spectroscopy was developed for forced degradation study estimation of carvedilol in pure and tablet dosage form. The estimation was carried out on UV spectroscopy PERKIN ELMER with LAMDA25 methanol used as a solvent. UV detection was carried out at 243 nm. The developed method was validated for linearity, accuracy, precision, limit of detection

and quantification as per ICH guidelines. The LOD and LOQ were found to be 10.30 µg ml, 31.23µg ml for carvedilol. The high percentage recovery and low percentage recovery of coefficient of variance confirms the suitability of the method and followed by forced degradation studies, the amount of degradation is within 5-20% as per the ICH guidelines and the proposed method was successfully used for the qualitative analysis of commercially available bulk and pharmaceutical dosage form of carvedilol.

Keywords: - UV Spectroscopy, Carvedilol, PERKIN ELMER,

A NEW RP-HPLC METHOD FOR THE ESTIMATION OF EMTRICITABINE AND RILPIVIRINE IN ITS BULK AND PHARMACEUTICAL DOSAGE FORM

Prathap B*, Srinivasa Rao G, Mohan Babu C, Priyanka V,

PPAA06

Department of Pharmaceutical Analysis, Saastra College of Pharmaceutical Education & Research, Nellore, Andhra Pradesh – 524311. **Email**: prathapnila@gmail.com

A simple, specific, linear, accurate and precise Reverse phase High Performance Liquid Chromatographic method was developed and validated for the estimation of Emtricitabine and Rilpivirine. Chromatographic separation was performed on Waters HPLC 2695 series with UV detection 2487 with column agilent C 18 column (150mm, 4.6mm, 5µ). The mobile phase containing methanol: phosphate buffer (70:30v/v) pH 3.0 adjusted with ortho phosphoric acid was selected. As it give good resolution and sharp peaks with flow rate of 1.0ml/min was used. The optimum wavelength selected was 254nm. Under these chromatographic conditions Emtricitabine and Rilpivirine peaks were well resolved, retention times of Emtricitabine and Rilpivirine was 2.335 and 3.40min respectively. The method was validated according to the ICH guidelines with respect to specificity, linearity, accuracy, precision and robustness. The proposed method was found to be simple and sensitive with linearity in the concentration range of 20 -100µg/ml for Emtricitabine and 10-50µg/ml for Rilpivirine. The method was found to be accuracy and precise as indicated by results of recovery studies and % RSD not more than 2 % LOD and LOQ for Emtricitabine were found to be 2.17 and 6.60 respectively and for Rilpivirine were found to be 0.0372 and 0.112 respectively. The developed RP – HPLC method leads to better resolution and peak summetry. Hence the developed RP – HPLC method for the estimation of Emtricitabine and Rilpivirine can be used for routine analysis of both these components in combined dosage form.

Keywords: Emtricitabine, Rilpivirine and RP – HPLC.

RECYCLING OF DRUGS FROM EXPIRED DRUG PRODUCTS

Pavan Kumar Reddy M*,Chand Basha S, Madhu M, Gopinath C

Annamacharya college of Pharmacy, New Boyanapalli, Rajampet, Y.S.R. Dist. - 516126, A.P., India

EMail:mpavankumarjilla@gmail.com

PPAA07

In general, most of drugs are not toxic when expired, but they can lose their effectiveness over time. The decrease in the concentration of the drug in drug product from 100% to 90% of its concentration is known as shelf life. The medication is used within its shelf-life, its shows maximum efficacy and the safety. The expiration date is the final day that the manufacturer guarantees the full potency and safety of a medication.Recently studies conducted by the U.S. Food and Drug Administration over 100 drugs, prescription and over-the-counter products showed that about 90% of them were safe and effective as long as 15 years past their expiration dates. India's pharmaceutical industry is losing around Rs 500 crore annually on account of destruction of expired drugs, hitting the bottom line of drug manufacturers, especially the small and medium ones. In our present communication, we made an attempt to study different methodologies for recycling active drugs from expired drug products (or) pharmaceutical dosage forms. It is attributed that when a drug product gets expired, it may contain 90% or even above of the Active Pharmaceutical Ingredient(s). Medicine recycling may be a possibility (especially if manufacturers are mandated to blister-package and bar-code individual tablets and capsules). The suitable chromatographic methods and analytical techniques could therefore be adopted for isolation and eventual quantification of active ingredients for the purpose of successful recycling into useful synthetic intermediates or active drugs. This approach would remain cost-effective as well as eco-friendly from the point of view of their industrial applicability and commercial benefits.

Keywords: Shelf-life, potency, blister-package, bar-code, chromatography, isolation

METHOD DEVELOPMENT AND VALIDATION FOR SIMULTANOUS ESTIMATION OF ITOPRIDE AND PANTAPRAZOLE IN BULK AND PHARMACEUTICAL DOSAGE FORM BY RP-HPLC METHOD

Golla Pampapathi*, B.Prathap, M. Jyothi, G. Srinivasa Rao

Department of pharmaceutical Analysis, Saastra College of Pharmaceutical Education & Research, Nellore, Andhra Pradesh – 524311.

PPAA07

A simple, fast, precise, selective and accurate RP-HPLC method was developed and validated for the simultaneous determination of Itopride and Pantaprazole form bulk and formulation. The proposed method was developed by HPLC Waters 2695 separation module with UV-Visible detector connected to Empower software using BDS C18 column (250X4.6mm, 5µ) with injection volume of 10µL was injected and eluted with a mobile phase composition of acetonitrile: phosphate buffer (65:35 v/v) pH was adjusted to 3.8 with ortho phosphoric acid which is pumped at a flow rate of 1.1ml/min and detected by UV-Visible detector at 212nm, ambient column temperature has maintained. The total run time was 7.0mins. The retention time of Itopride and Pantaprazole were found to be 2.6min and 3.4 min respectively. linearity was observed in the concentration range of 37.5 to 225µg/ml for Itopride and 10 to 60µg/ml for Pantaprazole respective with correlation coefficient 0.9999 for both the drugs. Percent recoveries obtained for both drugs were 99.43 to 100.28% respectively. The method was validated according to the ICH guidelines with respect to specificity, linearity, accuracy, precision and robustness. The method developed can be used for the routine analysis of Itopride and Pantaprazole from their combined dosage form.

Keywords: Amlodipine, Rosuvastatine and RP-HPLC, ICH Guidelines.