



Leading the tradition of
Quality and Excellence.....

Mehdipatnam, Hyderabad – 500 028. **Phone** : 040-2351 7222, 2351 5513;
E-mail : gprcphyd@yahoo.co.in, **Website** : www.gprcp.ac.in

G. PULLA REDDY COLLEGE OF PHARMACY

ESTD: 1994 - 95

Affiliated to Osmania University

Approved by AICTE and PCI

ISO 9001 - 2008 Certified institution for Graduate and Post Graduate Education

Website: www.gprcp.ac.in

E-mail: gprcphyd@yahoo.co.in

Phone: 040-23517222

Fax: 040-23515513



VISION

G.Pulla Reddy College of Pharmacy envisages to become the centre of excellence for research in Pharmacy. It aims to contribute significantly to drug development and drug discovery.

MISSION

G.Pulla Reddy College of Pharmacy aims to be on forefront in imparting the disciplined and quality Pharmacy education. The graduate & postgraduate students shall be groomed as responsible & highly acclaimed professionals in the Pharmaceutical Arena.

COURSES OFFERED

B. Pharm

M. Pharm - Pharmaceutical Chemistry

Pharmaceutics

Pharmacology

Pharmaceutical Analysis & Quality Assurance

Pharm. D

EAMCET CODE: GPRP

PGE CET CODE: GPRP1



One Day National Seminar on
“INNOVATIONS IN PHARMACEUTICAL RESEARCH- 2016”
AND POSTER PRESENTATIONS- 06th February 2016

ORGANIZING COMMITTEE

Convener - Dr. B. Madhava Reddy, Principal

Committee	Chairman	Members
Scientific Lectures	Dr.V.Harinatha Babu	Mrs. B. Jayanthi Reddy Mr. Shaik Naseeb Basha Mr. Y. Sree Hari
Registration	Dr. Sama Venkatesh	Dr. A. Ravi Kiran Mr. P. Ravi Kumar Mrs. C.S. Mahalakshmi
Poster Presentations	Dr. P. K. Lakshmi	Dr. D. Prasanthi Mrs. A. Lalitha Devi Mr. V. Sangram
Abstract	Dr. Y. Padmavathi	Dr. K. Latha Mrs. T. Radhika Mrs. S. Sravanthi
Hospitality	Dr. B. Veeresh	Mrs. R. Padmavathi Mrs. K. Pallavi Dr. K. Naresh Mrs. Ch. Rajeshwari Mr.N.Raghavendra Babu

Programme schedule

09.00 - 10.00 A.M : **Registration**
10.00 - 10.30 A.M : **Inauguration**
10.30 - 11.30 A.M : **Lecture I**
11.30 - 11.45 A.M : **Tea Break**
11.45 - 01.00 P.M : **Lecture II**
01.00 - 02.00 P.M : **Lunch Break**
02.00 - 05.00 P.M : **Poster Presentations**
05.00 - 05.30 P.M : **Valedictory function**
Prize & Certificate Distribution

Organized By
G. PULLA REDDY COLLEGE OF PHARMACY

CONTENTS

TITLE	Page Numbers
Pharmaceutical Chemistry	1 – 4
Pharmacognosy & Pharmaceutical Biotechnology	5 – 12
Pharmaceutics	13 – 31
Pharmacology	32 – 63
Pharmaceutical analysis & Quality Assurance	64 – 68
Pharmacy Practice	69 – 88

One Day National Seminar on
“INNOVATIONS IN PHARMACEUTICAL RESEARCH- 2016”
AND POSTER PRESENTATIONS- 06th February 2016

PHARMACEUTICAL CHEMISTRY



Organized By
G. PULLA REDDY COLLEGE OF PHARMACY

PCH 001

**ESTIMATION OF STEROLS CONTENT IN EDIBLE OIL AND GHEE
SAMPLES**

P. Harshitha*, T Raj Kumar

Dept. of Pharmaceutical Chemistry, Creative Educational Society's College of Pharmacy, Kurnool,
Andhra Pradesh – 518218.

Email ID: harshithapuggi44@gmail.com

The present investigation was carried out for the estimation of sterol content in marketed edible oil and ghee samples. Eight samples of edible oils and ghee samples were subjected for sterol estimation. The samples include Ragava Palm Swathi (refined palm oil), Kachi Ghani (Mustard oil), Naturrale (sunflower oil), K.S Brand (Gingelly oil), Parachute (coconut oil), Durga (pure ghee), Vandana (pure ghee) and Himaneesdevee (ghee) purchased from local market Kurnool, Andhrapradesh, India. The determination was done by measuring the absorbance on UV spectrophotometer using Liberman – Burchard reaction. The sterol contents of include Ragava Palm Swathi, Kachi Ghani, Naturrale, K.S Brand, Parachute, determined as 18 mg/gm, 48 mg/g, 56 mg/gm, 84 mg/gm and 13 mg/gm respectively, while for Durga, Vandana and Himaneesdevee found as 30 mg/gm, 29 mg/gm, 23 mg/gm. The more amounts of sterols was found to be in gingelly oil and coconut oil have less in comparison.

Key words: Sterols, Cholesterol, Liberman-Burchard, Oil.

PCH 002

**GREY CHEMISTRY, GREEN CHEMISTRY & CLICK CHEMISTRY - AT A
GLANCE**

L. Uday Goud*, T. Raj Kumar, L. Siva Sanker Reddy

Dept. of Pharmaceutical Chemistry, Creative Educational Society's College of Pharmacy,
Kurnool. Andhra Pradesh – 518218

Email ID: uvanuday28@gmail.com , rajkuty1983@gmail.com

All synthetic processes involve the use of different solvents. Unfortunately many of the solvents are used in industry and retail are volatile organic compounds which inevitably lead to environmental damage, through pollution, risks to human health and to resource depletion, we need to develop and apply more environmentally friendly approaches. So, all traditional and old synthetic routes are more or less "Grey" in their working and obviously give adverse effects to the mankind and all living beings.

Green chemistry provides “Green” paths for different synthetic routes using non-hazardous solvents and environmental- friendly chemicals. The fundamentally attractive concept of green chemistry is solvent free reactions. Solvent free reactions can be accelerated by microwave activation and this combined clean technology approach to "greening" chemical reactions. The two most widely studied "new" alternative solvents at present are ionic liquids and supercritical fluids. A traditional concept in process chemistry has been the optimization of the time-space yield. From our modern perspective, this limited viewpoint must be enlarged, as for example toxic wastes can destroy natural resources and especially the means of livelihood for future generations. Click Chemistry describe reactions that are high yielding, wide in scope, create only byproducts that can be removed without chromatography, are stereospecific, simple to perform, and can be conducted in easily removable or benign solvents. This main objective of this review is to compare Grey, Green and click chemistry and to find out the suitable methods and technologies to run a chemical reaction.

Key words: Grey chemistry, Green Chemistry, Click chemistry

PCH 003

SYNTHESIS, CHARACTERISATION, SCREENING AND INSILICO EVALUATION OF 1, 2, 3 -TRIAZOLE DERIVATIVES FOR THEIR ANTIFUNGAL ACTIVITY

P. Lakshmi Krithika*, Jabeen Khanam, Dr. Sreedevi Kudaravalli

Sultan Ul Uloom College Of Pharmacy, Hyderabad, Telangana

Email ID: kriticks@gmail.com

1, 2, 3- Triazoles have been extensively studied as compounds possessing important biological activities. In this work, we describe the synthesis of 2-(prop-2-yn-1-yloxy)-6-(trifluoromethyl) nicotinonitrile via copper catalyzed azide alkynes cycloaddition (CuAAC or click chemistry). The synthesized triazoles were characterized by ¹H NMR, MASS and IR spectral techniques. *Candida Albicans* is one of the most common causes of Invasive fungal infections. Azole antifungal agents are widely used as fungal antibiotics which inhibit the Cytochrome P450 sterol 14 α -demethylase (CYP51). This study describes the homology modeling and three dimensional model of CYP51 from *C. albicans*. Swissprot, PDB database, Rappert, Ramachandran plot and BLAST search (NCBI server) were used to analyse and evaluate a final model. The three compounds were evaluated for their in silico antifungal activity by selecting drug target as CytochromeP450 of *Candida albicans*. The triazole analogues showed good antifungal activity confirmed by molecular docking studies. Next the in vitro antifungal

activity of these three compounds was evaluated using the Sabourauds dextrose agar medium against *Candida* species. Among all the tested compounds, the third substituted triazole 2-((1-(3-methoxyphenyl)-1H-1,2,3-triazol-4-yl)methoxy)-6-(trifluoromethyl)nicotinonitrile, revealed the best antifungal profile, showing that further modifications could be done in the structure to obtain a better drug candidate in the future.

Key words: Click Chemistry; 1, 2, 3 -Triazoles; *Candida* spp ; Homology modeling; Antifungal activity.

PCH 004

EQUILIBRIUM STUDIES ON BIVALENT TRANSITION METAL CHELATES WITH BIOLOGICALLY ACTIVE CHALCONES

L. MeenakshiYadav*, T. Rajkumar, K. Sukanya, L. Siva Sanker Reddy

Dept. of Pharmaceutical Chemistry, Creative Educational Society's College of Pharmacy,
Kurnool, Andhra Pradesh – 518218

Email ID: rajkutty1983@gmail.com, meenakshihanuman28@gmail.com

Potentiometry is one of the most convenient and successful technique employed for metal complex equilibrium measurements. In the present work, the interactions of transition metal ions Co (II), Ni (II) with 5- Fluoro uracil has been investigated in 20 % (v/v) ethanol-water mixture at 0.1 M ionic strength at temp. 27°C Potentiometrically. Proton ligand (pK) and metal-ligand (logK) stability constant were determined by using Calvin Bjerrum titration technique as modified by Irving & Rossoti

Key words: Potentiometry, Stability constant, Transition metals, 5-Fluoro uracil.

PCH 005

DRUG DISCOVERY AND DESIGN

P. Viranchi*

Vikas College of Pharmaceutical Sciences, Suryapet, Nalgonda (Dist).

Email ID: viranchi.peddireddy@gmail.com

The process of drug discovery begins with the identification of new, previously and undiscovered, biologically active compounds, often called 'Hits', which are typically found by screening many compounds for the desired biological properties, we will next explore the various approaches used to identify 'Hits' and to convert these Hits into lead compounds and subsequently, into drug candidates suitable for clinical trials. Sources of 'hits' can originate from natural sources, such as

plants ,animals, or fungi ; from synthetic chemical libraries ,such as those created through combinatorial chemistry or historic chemical compound collections; from chemical and biologic intuition from years of chemical- biologic training; from targeted/rational drug design; or from computational modeling of a target site such as an enzyme. Chemical or functional group modifications of the ‘hits’ are performed in order to improve the pharmacologic, toxicological , physiochemical ,and pharmacokinetic properties of a ‘hit’ compound into a “ lead “compound. The final step of the drug discovery process involves rendering the lead compound into a drug candidate that is safe and suitable for use in human clinical trials, including the preparation of a suitable drug formulation.

Key words: Hits, Lead compound, Drug design and development.

PCH 006

GREEN CHEMISTRY

Priyanka*, S. Hemalatha

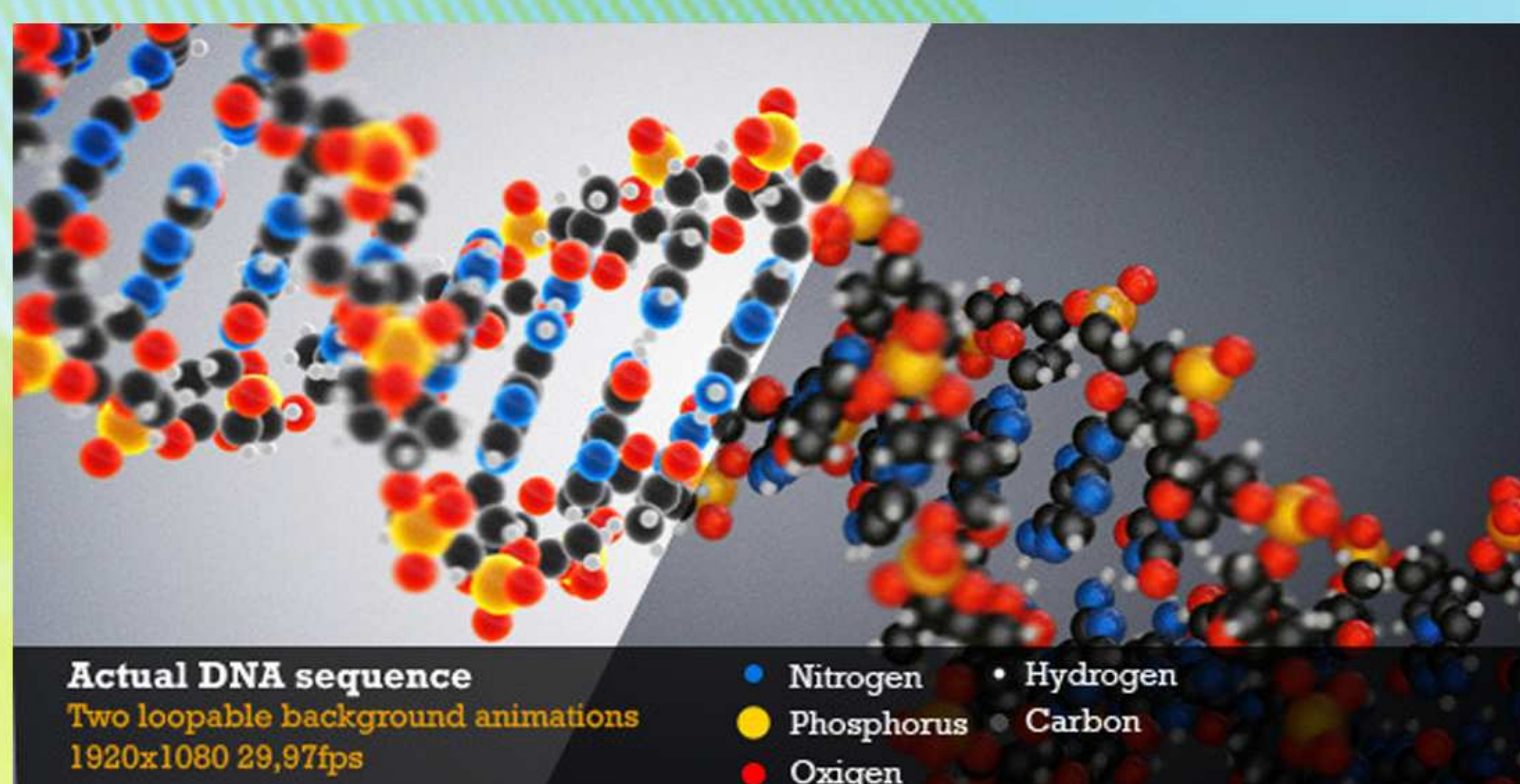
Sarojini Naidu Vanita Pharmacy Mahavidyalaya, Tarnaka,, Hyderabad – 500017

Email ID: piajaas0718@gmail.com

Green Chemistry efficiently utilizes (preferably renewable) raw materials, eliminates waste and avoids the use of toxic or hazardous reagents and solvents in the manufacture and application of chemistry products. The aim of green chemistry is to reduce chronic related impact on human health and virtually eliminate contamination of the environment through dedicated sustainable prevention programs. Green chemistry for alternative is eco-friendly reaction media and at the same time strives to increase reaction rates and lower reaction temperatures. In recent years, there is a greater societal expectation that chemist and chemical engineers should produce greener and more sustainable chemical processes. It is likely that this trend will continue to grow over the next few decades. Green chemistry is a fundamentally different approach that protects human and environmental health by replacing hazardous chemical processes and products with safer alternatives. The principles of green chemistry can be applied to each of the four main phases of the chemical and product life cycle, design, manufacture, use and end of life.

One Day National Seminar on
“INNOVATIONS IN PHARMACEUTICAL RESEARCH- 2016”
AND POSTER PRESENTATIONS- 06th February 2016

PHARMACOGNOSY & PHARMACEUTICAL BIOTECHNOLOGY



Organized By
G. PULLA REDDY COLLEGE OF PHARMACY

PCG 001

PHYTOSOMES: NOVEL APPROACH FOR HERBAL DRUG DELIVERY – A REVIEW

Faisal Mohammad Shamim Khan* P.J. Prasuna Sundari

Sri Venkateshwara College of Pharmacy, Hyderabad – 500081.

Email ID: jpspingali2014@gmail.com

Conventional herbal drug delivery systems like the pills, tablets, capsules or the ayurvedic formulations like the churnas, arishtas, asavas etc are not able to achieve the desired therapeutic efficacy. Biomolecules like flavonoids, tannins, terpenoids etc are water soluble. They lack lipophilicity thereby exhibiting poor bioavailability and reduced therapeutic efficacy. Phytosome is a vesicular delivery system wherein the phytoconstituent are bonded in a phospholipid like Soyalecithin, Distearoyl-phosphatidylcholine etc. This complex is more stable as the biomolecule is bonded to the polar head of the lipid by hydrogen bonding. Phytosomes are water soluble and their lipophilic outer layer enhances absorption, increase bioavailability and thereby the therapeutic efficacy of polar phytoconstituents. Phytosome technology successfully enhanced the bioavailability of curcumin, glycyrrhizin, luteolin, camptothecin etc. Hitherto, application of this technology to phytochemicals might further improve their efficacy and encourage the use of herbal medicine.

Key words: Phytosomes, Phospholipid, Bioavailability, Phytoconstituents.

PCG 002

DESIGN, DEVELOPMENT AND RATIONALIZATION OF SARPAGANDHA GHANVATI

B. Geethika Reddy*, Preethi

Sultan Ul Uloom College of Pharmacy

Email ID: geethika.reddy663@gmail.com

Sarpagandha ghanvati is a classical ayurvedic formulation widely prescribed for anxiety and insomnia. It contains Sarpagandha, ajowan seeds, jatamansi roots and pipplamul. The objective of this study was to make a comparative evolution of ghanvatis and tablets of this formulation. Two tablet formulations were prepared one incorporating powders of all ingredients and other with ethanol extracts of first three ingredients and powder of *piper logum* root. Similarly two types of sarpagandha pills were prepared one as per ayurvedic formulary of India the other with ethanol extract of first 3 ingredients and powder of *piper logum* root. Alcohol extracted 0.22% w/w of total alkaloids as against 0.061% w/w

extracted by water. Tablets prepared with powder of all the ingredients had friability more than 3% where as those prepared with ethanol had very low friability. Ghanvatis prepared as per ayurvedic formulary did not show reserpine although other alkaloids were present. They showed less content uniformity and low drug release. Ethanol extracted reserpine along with other alkaloids. Ghanvatis made with alcoholic extracts exhibited better content uniformity and drug release than the traditional formulations. Tablets prepared with powders or extracts of the ingredients exhibited good content uniformity with 90% release of total alkaloids. Tablets prepared with alcoholic extracts using 1% pvp as binder and 5% dried starch powder as disintegrating agent confirmed to all requirements. Thus the study shows tablets made with extracts are superior to ghanvatis and powder tablets.

PCG 003

EVALUATION OF ANTIHYPERLIPIDEMIC ACTIVITY OF *PUPALIA LAPPACEA* ETHANOLIC LEAF EXTRACT IN TRITON INDUCED HYPERLIPIDEMIA RATS

Rubeena Begum*, Kahira Tasneem, Arshia Sultana, Dr. B Veeresh.

G. Pulla Reddy College of Pharmacy, Mehdiapatnam, Hyderabad-500024

Deccan School of Pharmacy, Nampally, Hyderabad.

Email ID: rubsattar57@gmail.com

Pupalia lappacea is a perennial herb belonging to the family amaranthaceae possess antinociceptive, antioxidant, antiinflammatory, antispasmodial, antipyretic and anticancer activity. The phytochemical analysis revealed the presence of flavonoids, triterpenoids, alkaloids, phenolic compounds, tannins, and saponins. The study was aimed to elucidate antihyperlipidemic effect of ethanolic leaf extract *Pupalia lappacea* on triton induced hyperlipidemia in rats. Rats were divided into five groups (n=6). Group-I (normal control) received vehicle, groups II (diseased control) received triton 150mg/kg b.w i.p (single dose). Group III & IV (test drug treated) received triton 150mg/kg i.p & ethanolic leaf extract of *Pupalia lappacea* 100mg/kg and 300mg/kg b.w orally respectively. Group IV (Standard drug treated) received triton 150mg/kg & atorvastatin 10mg/kg b.w. All the groups received the respective treatment for 21 days. Blood samples were collected after 24hrs of last administration and used for the estimation of serum lipid profiles. Administration of triton resulted in elevation of total cholesterol (TC), triglycerides (TG), low density lipoprotein (LDL), very low density lipoprotein (VLDL) and decline in high density lipoprotein (HDL). Fresh ethanolic leaf extract of test drug at a dose of 100mg/kg and 300mg/kg b.w resulted in dose dependent significant decline in total cholesterol (TC), triglycerides (TG), low density lipoprotein (LDL), very low density lipoprotein (VLDL) and

increase in high density lipoprotein (HDL). The test drug treated group has shown similar effect to that of the standard drug treated groups. The results of the study revealed antihyperlipidemic effect of *Pupalia lappacea* in triton induced hyperlipidemic rats.

PCG 004

FOOD ADULTERATION

K. N. Meenakshi *, Anuradha Khuntia

CES College of Pharmacy, Kurnool, Andhra Pradesh

Email ID: ms.meenakshishetty@gmail.com

Man cannot live without food. It is essential for health and life. But this food must be pure, clean and fresh. Nowadays, foods are often adulterated. In hotels and restaurants stale and rotten foods are mixed with fresh food and served to the customers. Fish and vegetables are adulterated by putting on them chemicals and other preservatives in order to make them look fresh. Bakery and confectionery products are also adulterated by using toxic substances. Junk food contains harmful chemicals. Even fruits, milk and beverages are also adulterated. Sometimes foods are given artificial colours to make them bright and attractive to the people. Even poisonous chemicals are used for this purpose. But it is a serious threat to public health. It may cause fatal diseases such as kidney failure, cancer, and diarrhoea and so on. Sometimes the adverse effect of adulteration is quick and sometimes slow. In fact, all kinds of foods and food articles are adulterated by dishonest and greedy businessmen for a quick and unearned profit. Adulterated foods are a serious health hazard. They cause many fatal diseases and even death. Food adulteration has become an alarming problem in our country. Dealing in adulterated food is a great crime. The criminals have to be identified and punished. However, though our government has taken some steps to remove food adulteration, but these are not sufficient at all. In the end, it is not possible for the government to solve food adulteration problem in single hand. Public awareness should be created so that people can become careful about buying foods and food articles. Adulteration is done in such a way that it cannot be understood easily. We cannot let it continue. It should be stopped immediately. For this, law should be made more effective. And compulsory punishment should be given to the culprits. People should also be motivated against food adulteration. It is a national problem as it is directly related with human life of the whole country. So we should untidily stand against this for the prevention of food adulteration.

PCG 005

NUTRACEUTICAL- A BRIGHT SCOPE FOR HEALTH CARE IN MANAGING CHRONIC DISEASES

K Sravya Reddy*

Bharat Institute of Technology, Ibrahimptnam, Telangana - 501510

Email ID: sravyakakulavaram07@gmail.com

Nutraceuticals are the supplements which play a major role in maintaining wellbeing, enhancing health, modulating immunity. Usage of nutraceuticals, will impart advantages like reducing or eliminating the need for conventional medications, along with reducing their adverse effects. Nutraceuticals contain health-promoting ingredients or natural components that have a potential health benefit for the body and they are derived from various sources such as medicinal plants, marine organisms, vegetables and fruits. They do not certainly fall into the legal category of food and drug and often inhabit a grey area between the two. Some popular nutraceuticals include glucosamine, ginseng, Echinacea, folic acid, flavonoids, Polyols, Prebiotics, cod liver oil, omega-3 eggs, calcium-enriched orange juice, green tea etc. Nutraceuticals used in various diseases like Cardio vascular diseases, obesity, Alzheimer's disease, cancer, Diabetes, etc. In 2006, the Indian government passed Food Safety and Standard Act to regulate the nutraceutical industry. The nutraceutical revolution will lead us into a new era of medicine and health, in which the food industry will become a research, oriented one similar to the pharmaceutical industry and will play a key role in treating specific diseases. Thus the field of nutraceutical can be projected as one of the foremost area in managing chronic diseases.

Key words: Health promoting, cardio vascular diseases, prebiotics, obesity and supplements.

PCG 006

**EVALUATION OF THE ANTHELMINTIC ACTIVITY OF PUMPKIN SEEDS
(*CUCURBITA MAXIMA*) IN MICE NATURALLY INFECTED WITH
*ASPICULURIS TETRAPTERA***

N. Sai Prathyusha*

MLR Institute of Pharmacy, Dundigal, Hyderabad-500043

Email ID: saiprathyusha736@gmail.com

The aim of this study was to investigate the anthelmintic effect of pumpkin seeds against *Aspiculuris tetraptera* in naturally infected mice. For this purpose, the natural infection was determined

by the cellophane tape (on anal region) and the centrifugal flotation methods of stool samples in approximately 150 male Swiss albino mice (27-35g). The infected mice (29 animals) were divided into four groups. The animals of first group and second group received water and ethanol extracts of pumpkin seeds orally at the dose suggested for human for 7 days, respectively. The mice in positive control group (third group) were treated with Ivermectin intramuscularly at a dose of 0.2mg/kg body weight. The mice in fourth group received the same amount of serum physiologic orally. At the eighth day of the study, all animals were killed humanly following inhalation anaesthesia. After euthanasia, the number of parasites in the intestine was counted. Data obtained from the treatment groups were compared using one way ANOVA. The percentage efficacy of the drugs was calculated. The results of the study showed that the efficacies for water and ethanol extracts of pumpkin seed and ivermectin were 81, 85 & 91% compared with the negative control, respectively. These results revealed that pumpkin seed has high anthelmintic activity against nematodes as well as its continued use in traditional medicine for the treatment of helminthiasis.

PCG 007

HERBAL AND SYNTHETIC DRUG INTERACTION - A REVIEW

D. Mabu Subhan*, K. Saddam Hussain, H.G. Raghavendra.

Dept. Of Clinical Pharmacy and Biopharmay, CES College of Pharmacy, KURNOOL, A.P

Email ID: mabusubbu3@gmail.com

Number of patients who use easily available herbal medicines are growing rapidly. The drugs are often regarded to be safe alternative when conventional therapies are not effective. Testing drug pharmacokinetics in vivo is of special importance. It is to be remembered that an interaction predicted theoretically and confirmed in vitro does not have to implicate a clinical importance. In the paper several important herb – drug interactions occurring in the pharmacokinetic phase are reported. Interactions occurring in the biotransformation phase are the most common and of particular importance, especially if cytochrome P450 (CYP) isozymes are involved. Determining changes in pharmacokinetics enable modifying doses of interfering drugs.

Key words: Herb – drug interactions, cytochrome P450, P – gp, drug Pharmacokinetics.

PCG 008

***Naegleria fowleri* – THE BRAIN CRAVING BRUTE.**

Unnati Perishetty*, Harriet Joseph, Nithya Reddy Vemula, Dr Soumadip Das,

Dr K.S Murali Krishna.

MLR Institute of Pharmacy, Dundigal, Quthbullapur, Hyderabad, R.R district, 500043.

Email ID: unnati.p210997gmail.com

Primary Amoebic Meningoencephalitis (PAM) affects central nervous system. It is rare, caused by *Naegleria fowleri* brain-eating amoeba. It eventually affects brain fatally. The first PAM was reported in Virginia in 1937. From 1937-2007, 121 cases (0-8 per year) were reported. The male-to-female ratio is 2:1, nearly uniformly fatal. Only 5% survivors have been reported (3% of reported cases). The latest case was reported from Kolkata earlier this month. It enters the host through contaminated water or food and is found in the throat and nasal cavity. During initial stages of infection, host response includes secretion of mucus, despite this it penetrates through epithelium. Glucose and protein of CSF aid in growth and multiplication of amoeba. They reach the choroid plexus and destroy the ependymal layer and cause acute ependymitis. They then undergo promitosis. Only trophozoites are found in the pathologic lesions in humans. PAM can be diagnosed in the laboratory by detecting *N.fowleri* organism or nucleic acid or the antigen in cerebrospinal fluid or tissue specimens. The tests performed for its detection are direct visualization, antigen detection, polymerase chain reaction, amoeba culture. On the basis of the laboratory evidence and case reports, Amphotericin B appears to be the only one promising treatment available for PAM. Patients often suffer from fever, sudden and severe headache, sensitivity to light, seizures, hallucinations, sleeplessness. The treatment also includes combination therapy with multiple other antibiotics such as Rifampicin; Miconazole etc.

PCG 009

MULTIFUNCTIONALITY OF FLAVANOIDS

M.Shruti*, Vaishali Kute

Teegala Krishna Reddy College of Pharmacy, Meerpet, Hyderabad.

Email ID: Shruti.madharla7@gmail.com

There is increasing interest in the potential health benefits of dietary flavonoids. Fruits and vegetables, tea, and cocoa are rich natural sources of flavonoids. Epidemiological studies have indicated that consumption of these foods is likely to be associated with a reduced risk of cardiovascular disease, but the etiology of this benefit is not yet clearly defined. Furthermore, in some

acute interventions, a positive effect of tea and cocoa on vascular function has been reported. An alternative source of flavonoids is dietary supplements, which have become increasingly popular in the recent past. In this context, it needs to be critically evaluated whether vascular health-promoting and other positive properties of flavonoid-rich diets can be replaced by purified flavonoids as dietary supplements. Plant sources of flavonoids contain a complex mixture of secondary plant metabolites and not only flavonoids per se. This complex mixture of secondary plant metabolites cannot be simply exchanged by single purified compounds as dietary supplements. Purified flavonoids given in high doses as dietary supplements may affect trace element, folate, and vitamin C status. Furthermore, they may exhibit antithyroid and goitrogenic activities.

PCG 010

IN VITRO ANTIPYRIAL ACTIVITY OF *PSIDIUM GUAJAVA* LEAF EXTRACT

Syed Imran Ul Haq*, Dr. Tribhuvan Singh

Guru Nanak Institutions Technical Campus, Ibrahimpatnam, Hyderabad – 501506

Email ID: iemraanzz@gmail.com

Chemical substances used for prevention of dental caries are known to have many side effects. Thus natural products should be explored for their anti caries action. Dental plaque when allowed to accumulate may lead to caries formulation and discomfort due to inflammation of the gingival area. Natural compounds may offer significant advantage over the chemical ones and formulation of such compounds if easy to use and safe by people may lead to improvement in the general health of the population streptococcus mutants is normally found in oral cavity, which is responsible to cause dental caries and bad odour.

Key words: *Psidium guajava* leaf, antipyral activity, streptococcus mutants.

PCG 011

3D BIOPRINTING OF TISSUES AND ORGANS

Pooja Sharma*, K. Pallavi

G. Pulla Reddy College of Pharmacy, Hyderabad, Telangana, India.

Email ID: Sharma.pooja24895@gmail.com

Additive manufacturing, otherwise known as three-dimensional (3D) printing, is driving major innovations in many areas, such as engineering, manufacturing, art, education and medicine. Recent advances have enabled 3D printing of biocompatible materials, cells and supporting components into

complex 3D functional living tissues. 3D bioprinting is being applied to regenerative medicine to address the need for tissues and organs suitable for transplantation. Compared with non-biological printing, 3D bioprinting involves additional complexities, such as the choice of materials, cell types, growth and differentiation factors, and technical challenges related to the sensitivities of living cells and the construction of tissues. Addressing these complexities requires the integration of technologies from the fields of engineering, biomaterials science, cell biology, physics and medicine. 3D bioprinting has already been used for the generation and transplantation of several tissues, including multilayered skin, bone, vascular grafts, tracheal splints, heart tissue and cartilaginous structures. Other applications include developing high-throughput 3D-bioprinted tissue models for research, drug discovery and toxicology.

PCG 012

STEM CELL THERAPY USING UMBILICAL CORD BLOOD

M. Supraja Reddy*, K. Pallavi

G. Pulla Reddy College of Pharmacy, Hyderabad, Telangana , India

Email ID: suprajareddy112@gmail.com

Stem cell therapy is the use of stem cells to treat or prevent a disease or condition. Stem cells have the capability for renewal and differentiation into various lineages of mesenchymal tissues. These features of stem cells attract a lot of attention from investigators in the context of cell-based therapies of several human diseases. Despite the fact that bone marrow represents the main available source of stem cells, the use of bone marrow-derived cells is not always acceptable due to the high degree of viral infection and the significant drop in cell number and proliferative/differentiation capacity with age. Thus, the search for possible alternative stem cells sources remains to be validated. More recently, umbilical cord blood (UCB), attainable by a less invasive method, introduced as an alternative source for stem cells.

**One Day National Seminar on
“INNOVATIONS IN PHARMACEUTICAL RESEARCH- 2016”
AND POSTER PRESENTATIONS- 06th February 2016**



PHARMACEUTICS



**Organized By
G. PULLA REDDY COLLEGE OF PHARMACY**

PCU 001

MICROCHIP: A NOVEL DRUG DELIVERY SYSTEM

Ch.Abhisri*, Ch.Rajeswari.

G. Pulla Reddy College of Pharmacy, Hyderabad.

Email ID: abhisrich@gmail.com

Microchip, it is an advanced type of drug delivery system where the microchip is implanted under the skin and connected to a wireless control system. It reduces the inconvenience associated with taking drugs manually. It has built-in biosensors where they give information regarding pulse rate, blood oxygen levels and other functions. Based on this information they can increase or decrease the frequency and quantity of drug delivered. Microchip is a device it consists of anode, cathode and a reservoir. Drug releases based on reaction between anode and cathode. This technique is beneficial to psychiatric and elderly patients who rely on the complicated regime of drugs. It is a potential demand, that allows storage and release of multiple drugs.

Key words: Microchip, anode, cathode, reservoir.

PCU 002

FORMULATION AND EVALUATION OF MUCOADHESIVE MICROSPHERES OF PIOGLITAZONE HYDROCHLORIDE USING A NATURAL POLYMER

Mobeen Mohd.*, Ramakrishna R., Sathish A., Prakash G., Sarika M., Banu Thaiseen

Vaageswari Institute of Pharmaceutical Sciences, Karimnagar, Telangana – 505481

Email ID: mubeen682336@gmail.com

The objective of the present investigation was to design a controlled release dosage form for a thiazolidinedione oral hypoglycemic drug i.e., pioglitazone hydrochloride that can maintain relatively constant drug level in the plasma by releasing the drug at a predetermined rate for an extended period of time. Pioglitazone is a poorly water soluble drug, having a short biological half-life (3-5 hour), so the present study was also aimed to increase the biological half-life by developing it in the form of sustained release microspheres. The present study aimed at employing a natural polymer in formulating the mucoadhesive microspheres and estimates its effect over the controlled release of the drug from the formulation in comparison to those formulations which were designed using conventional polymers. The microspheres were prepared by employing sodium alginate as a cell forming polymer and by using a natural bio-adhesive polymer viz. gori gum in the ratios of 1:1, 1:1.5 and 1:2, by orifice ion gelation method with varying concentrations of calcium chloride. Six batches of microspheres (MS1 – MS6) were prepared. These were evaluated for various micromeritic properties and it was observed that all

the batches exhibited free-flowing properties. SEM results showed that the microspheres were almost spherical in shape and discrete. The FTIR results showed that there were no interactions between the drug and the excipients. The *in vitro* release profile indicated that all the batches of microspheres showed controlled and prolonged drug release over an extended period, with acceptable release kinetics. The work demonstrated that among all the formulations of microspheres, the microspheres of the formulation MS4 are promising candidates for the sustained release of pioglitazone hydrochloride.

Key words: Thiazolidinedione, Pioglitazone hydrochloride, Sodium alginate, Hypoglycemic drug, Mucoadhesion, Microspheres, Orifice ion gelation method.

PCU 003

ULTRASOUND MEDIATED DRUG DELIVERY SYSTEM

K. Supriya*, Soubia Samreen

CES College of Pharmacy, Kurnool, AP.

Email ID: karanamsupriya3@gmail.com

Ultrasound has received less attention than other imaging modalities for molecular imaging, but has a number of potential advantages. It is cheap, widely available and portable. Using Doppler methods, flow information can be obtained easily and non-invasively. It is arguably the most physiological modality, able to image structure and function with less sedation than other modalities. This means that function is minimally disturbed, and multiple repeat studies or the effect of interventions can easily be assessed. High frame rates of over 200 frames a second are achievable on current commercial systems, allowing for convenient cardiac studies in small animals. It can be used to guide interventional or invasive studies, such as needle placement. Ultrasound is also unique in being both an imaging and therapeutic tool and its value in gene therapy has received much recent interest. Ultrasound biomicroscopy has been used for in utero imaging and can guide injection of virus and cells. Ultra high frequency ultrasound can be used to determine cell mechanical properties. The development of micro bubble contrast agents has opened many new opportunities, including new functional imaging methods, the ability to image capillary flow and the possibility of molecular targeting using labeled micro bubbles.

PCU 004

FAST DISSOLVING TABLET TECHNOLOGY-A REVIEW

Zeba Begum*, Sofia Konain.

Deccan School of Pharmacy, Hyderabad. Telangana – 500058.

Email ID: zeba9156@gmail.com

The convenience of administration and improved patient compliance are important in the design of oral drug delivery system which remains the preferred route of drug delivery in spite of various disadvantages. One such problem can be solved in the novel drug delivery system by formulating “mouth dissolving tablets” (MDTs) which disintegrates or dissolves rapidly without water within few seconds in the mouth due to the action of superdisintegrant or maximizing pore structure in the formulation. Such formulations provide an opportunity for product line extension in the many elderly persons will have difficulties in taking conventional oral dosage forms (viz., solutions, suspensions, tablets, and capsules) because of hand tremors and dysphagia. Swallowing problems also are common in young individuals because of their underdeveloped muscular and nervous systems. In the present review the formulation techniques and different technologies are discussed.

Key words: Fast Dissolving Tablet, Rapid Disintegration, formulation techniques, Mouth Dissolving Tablets.

PCU 005

NIOSOMES: A REVIEW

N. Manusha*, P. Ravi Prakash

Dept. of Pharmaceutics, Creative Educational Society's College of Pharmacy, Kurnool, A.P.

Email ID: manusha079@gmail.com

Target oriented drug delivery systems are the areas of the major interest in the modern Pharmaceutical research. The selective drug delivery to the target tissues increases the therapeutic efficacy of the drug and reduces its undesirable effect to non target tissues. The main goal of a site specific drug delivery system is not only to increase the selectivity and drug therapeutic index, but also to reduce the toxicity of the drug. Number of carriers was utilized to carry drug at the target organ/tissue, which include immunoglobulins, serum proteins, synthetic polymers, liposomes, microspheres, erythrocytes, niosomes etc. Among different carriers niosomes are well documented drug delivery systems. Niosomes or non-ionic surfactant vesicles are microscopic lamellar structures formed on admixture of non-ionic surfactant of the alkyl or dialkyl polyglycerol ether class and cholesterol

with subsequent hydration in aqueous media. In niosomes, the vesicles forming amphiphile is a non-ionic surfactant which is usually stabilized by addition of cholesterol and small amount of anionic surfactants. They improve the therapeutic performance of the drug molecules by delayed clearance from the circulation, protecting the drug from biological environment and restricting effects to target cells. This article focuses on the recent advances in niosomal drug delivery, advantages over other delivery systems, formulation methods, characterization and the current research. Niosome appears to be a well preferred drug delivery system over other systems being stable and economic. Niosomes have great drug delivery potential for targeted delivery. Niosomes also serve better aid in diagnostic imaging. Thus these areas need further exploration and research.

PCU 006

AEROSOLS PROPELLANTS – A REVIEW

B.Likitha Reddy*, P. Ravi Prakash

Dept. of Pharmaceutics, Creative Educational Society's College of Pharmacy, Kurnool

Email ID: likithabyreddy70@gmail.com

Pharmaceutical Aerosols are pressurized dosage forms containing one or more active ingredients which upon actuation emit a fine dispersion of liquid and/or solid materials in a gaseous medium. An aerosol formulation consists of two component parts, the product concentrate and the propellant. Propellant plays an important role in aerosol formulation. Chloroflourocarbons are most widely used propellants in aerosol products. In order to represent easily to the fluorinated hydrocarbons, a relatively simple system of nomenclature was developed. Propellants are assigned numbers, viz., Propellant 114, Propellant 12, etc. Aerosols can directly reflect sunlight back away from the Earth and can interact with clouds in complex ways leading to changes in cloud reflectivity, cloud lifetime, cloud height and cloud precipitation, which have led to an associated cooling of climate. This cooling acts to counterbalance some of the warming due to increased concentrations of greenhouse gases and thus affect the environment. In this presentation, emphasis was made to inform in detail about various propellants available, assigning numbers to the propellants and also on environmental hazards.

PCU 007

DISSOLUTION TESTING - TECHNIQUES

P.G.Tejaswini*, P. Ravi Prakash

Dept. of Pharmaceutics, Creative Educational Society's College of Pharmacy, Kurnool, A.P.

Email ID: manusha079@gmail.com

For most dosage forms to be efficacious, the API(s) must be absorbed into the systemic circulation so that it can be transported to its site of activity. This process contributes to the bioavailability of the drug substance and involves two steps: dissolution and absorption (or permeability). Understanding the multi-step dissolution process is essential to proper *in vitro* method development. Dissolution is the process of extracting the API out of the dosage form into solution within the gastrointestinal tract. Dissolution testing is an *in vitro* method that characterizes how an API is extracted out of a solid dosage form. It can indicate the efficiency of *in vivo* dissolution but does not provide any information on drug substance absorption. Dissolution testing is a requirement for all solid oral dosage forms and is used in all phases of development for product release and stability testing. It is a key analytical test used for detecting physical changes in an active pharmaceutical ingredient (API) and in the formulated product. At early stages of development, *in vitro* dissolution testing guides the optimization of drug release from formulations. Dissolution testing is described in many Pharmacopoeias.

PCU 008

A REVIEW ON NANO SPONGES

S. Raj Kumar*, M. Nagarjun, Rekha Rani.

CES College of Pharmacy, Kurnool.

Email ID: sravanraj8985@gmail.com

In targeted drug delivery to specific sites is significant problem which is being faced by many researchers. The development of new and complex molecules nanosponges has potential to solve this problem. Nanosponges are tiny sponges with a size of about a virus. This can be filled with a wide variety of drugs and complex molecules. These tiny sponges can circulate around the body until they encounter the specific target site and stick on the surface and begin to release the drugs in a controlled and predictable manner. Because nanosponges play a vital role in targeting drug delivery in a controlled released rate. Nanosponges are a novel and emerging technology which offers targeted and controlled drug delivery for topical as well as oral use. A large variety of substances or drugs can be encapsulated

in to the wide cavities of nanosponges. Another important feature of these nanosponges is their water soluble. The nanosponges carrying both lipophilic and hydrophilic substances and mostly improving the solubility of poorly water soluble drugs. In this review application of nanosponges, method of preparation, evaluation parameter and future trend will be discussing.

Key words: Targeted Drug Delivery, Nano sponges.

PCU 009

TRANSFEROSOMES: A NOVEL VESICULAR CARRIER FOR TRANSDERMAL DRUG DELIVERY SYSTEM

V. Renuka Devi*, P. Ravi Prakash

Dept. of Pharmaceutics, Creative Educational Society's College of Pharmacy, Kurnool, A.P.

Email ID: renu.gogula95@gmail.com

Novel drug delivery systems are now a day is creating a new interest in development of drug deliveries. TDDS is the permeability of the skin, it is permeable to small molecules, lipophilic drug and highly impermeable to the macromolecules and hydrophilic drugs. Recent approaches have resulted in design of two vesicular carriers, ethosomes and ultra flexible lipid based elastic vesicles, transferosomes. Transferosomes have recently been introduced, which are capable of transdermal delivery of low as well as high molecular weight drugs. This offers several potential advantages over conventional routes like avoidance of first pass metabolism, extended duration of activity, minimizing undesirable side effects, utility of short half life drugs, improving physiological and pharmacological response. It is suitable for controlled and targeted drug delivery and it can accommodate drug molecules with wide range of solubility. They are biocompatible and biodegradable as they are made from natural phospholipids and have high entrapment efficiency. Characterization of transferosomes can be done to know the vesicle size, morphology, drug content, entrapment efficiency, penetration ability, occlusion effect, surface charge, in vitro drug release, in vitro skin penetration etc., It increases stability of labile drugs and provides control release. Transferosomes thus differs from such more conventional vesicles primarily by its softer, more deformable, better adjustable artificial membrane.

Key words: Transferosomes, Novel Drug Delivery System.

PCU 010

REVIEW ON EXPLORING POTENTIAL OF UFASOMES

Anusha. T*

Bharat Institute of Technology, Ibrahimpatnam, Telangana – 501510

Email ID: anushatirupate@gmail.com

Ufasomes are unsaturated fatty acid vesicles which are composed of suspensions of closed lipid bilayers that constitute fatty acids along with their ionized species (soap) which are ionized and unionized in nature. In ufasomes, fatty acid molecules are focused in such a pattern that their hydrocarbon tails are directed toward the inner membrane and the carboxyl groups are in direct contact with water. Ufasomes are derived from unsaturated fatty acids like oleic acid and linoleic acid and later it was investigated that it can be formulated from saturated fatty acids like octanic and decanoic acid. The main advantages of ufasomes include their cost effectiveness; therapeutic viability and increased permeation of drugs and besides liposomes and niosomes, ufasomes have been tested for their potential topical/transdermal delivery. The stability of the formulation depends upon proper selection of fatty acids, pH range, amount of cholesterol, amount of lipoxigenase used. Recent innovations shall provide prospect to formulate ufasomes with significant features such as extension of pH range, insensitivity toward divalent cations, and enhancement of stability. Recent studies have proved that ufasomes are also found as carriers for transfer of genes from plants to soil micro-organisms. Finally, compared to other vesicular drug delivery systems, ufasomes offer better carrier properties.

Key words: Vesicular carrier, Ufasomes, Fatty acids, Stability and Transdermal delivery.

PCU 011

AN OVERVIEW ON 'SMART POLYMERS'

Mounika Madasu*

Bharat Institute of Technology, Hyderabad, Telangana.

Email ID: Mona.madasu26@gmail.com

Smart Polymeric drug delivery systems are evolved as intelligent drug delivery systems which are able to release the drug drug at appropriate time and appropriate site of action. The responses Obtained from the polymers are widely from swelling/contraction to disintegration. Development of smart polymer systems may lead to more accurate and programmable drug delivery. The latest developments in polymers capable of molecular recognition or directing intracellular delivery are surveyed to illustrate areas of research advancing the frontiers of drug delivery. Environmentally-

responsive polymers, or smart polymers, are a class of materials comprised of a large variety of linear and branched (co)polymers or crosslinked polymer networks. A hallmark of responsive polymers is their ability to undergo a dramatic physical or chemical change in response to an external stimulus. Moreover, the preparation of new polymeric materials by the synthesis of new polymers with unique properties or by the modification of available natural or synthetic polymers, offer to the formulator a wide range of applications in order to optimise the drug delivery for each specific case. The wide range of polymers available for pharmaceutical use, their low reactivity towards drugs and other formulation ingredients and their safe nature, have permitted a widespread use of polymers to improve manufacturing processes or for the formulation of pharmaceutical dosage forms for various administration routes.

Key words: Polymers, Synthetic Polymers, Swelling, Contraction, Disintegration.

PCU 012

RESEALED ERYTHROCYTES DRUG DELIVERY

Kahira Tasneem^{1*}, Rubeena Begum²

¹Deccan School of Pharmacy, Nampally, Hyderabad.

²G. Pulla Reddy College of Pharmacy, Mehdiapatnam, Hyderabad.

Email ID: kahira93@gmail.com

Erythrocytes, also known as Red Blood Cells, and have been extensively studied for their potential carrier capabilities for the delivery of drug. Carrier erythrocytes have been evaluated in thousands of drug administration in humans proving safety and efficacy of the treatments. Such drug loaded carrier erythrocytes are prepared simply by collecting blood samples from the organisms of interest, separating erythrocytes from plasma, entrapping drug in the erythrocytes, and resealing the resultant cellular carriers, these carriers are called as Resealed Erythrocytes. Resealed Erythrocytes are Biocompatible, Biodegradable, possess long circulation half-life and can be loaded with variety of active substance. Erythrocytes can be used as carriers in two ways, Targeting particular tissue or organ; this is obtained by splitting the cell in hypotonic solution. Alternatively, erythrocytes can be used as a continuous or prolonged release system, which provide prolonged drug action. Erythrocytes mediated drug delivery had been reported with therapeutic enzymes and anti-viral agents to maximize therapeutic performance, reduce the side effects, as circulating depots for controlled drug release, drug targeting, treatment of parasite disease, hepatic tumour, removal of toxic agent.

Key words: Erythrocytes, Resealed Erythrocytes.

PCU 013

DNA FINGER PRINTING - FORENSIC SCIENCES

Anughna Indrakanti*, Aparna Kaluvakollu

Creative Educational Society College of Pharmacy, Chinnatekur, Kurnool.

Email: anirudhsrivatsavias@gmail.com

DNA profiling (also called DNA fingerprinting) is a forensic technique used to identify individuals by characteristics of their DNA. It is a small set of DNA variations that is very likely to be different in all unrelated individuals, thereby being as unique to individuals as are fingerprints. First developed and used in 1985, DNA profiling is used in parentage testing and criminal investigation, to identify a person or to place a person at a crime scene, techniques which are now employed globally in forensic science to facilitate police detective work and help clarify paternity and immigration disputes. Although 99.9% of human DNA sequences are the same in every person, enough of the DNA is different that it is possible to distinguish one individual from another, unless they are monozygotic twins. The process begins with a sample of an individual's DNA. The most desirable method of collecting a reference sample is the use of a buccal swab, as this reduces the possibility of contamination. When this is not available other methods may need to be used to collect a sample of blood, saliva, semen or other appropriate fluid or tissue from personal items or from stored samples. Samples obtained from blood relatives (related by birth, not marriage) can provide an indication of an individual's profile. A reference sample is then analyzed to create the individual's DNA profile using number of techniques. The DNA profile is then compared against another sample to determine whether there is a genetic match.

Key words: Profiling, monozygotic twins

PCU 014

ORALLY DISINTEGRATING TABLETS

V.Vineetha*, V. Lakshmi Durga, A. Nageshwar Rao

CES College of Pharmacy, Chinnatekur, Kurnool

Email ID: **vinithavajrala@gmail.com**

Drug delivery systems are becoming increasingly sophisticated as pharmaceutical scientists acquire a better understanding of the physicochemical and biochemical parameters pertinent to their performance. ODTs are solid dosage forms containing medicinal substances which disintegrate rapidly, usually in a matter of seconds, when placed on the tongue. Products of ODT technologies have grown

steadily in demand, and their product pipelines are rapidly expanding. New ODT technologies address many pharmaceutical and patient needs, ranging from enhanced life cycle management to convenient dosing for paediatric, geriatric, and psychiatric patients with dysphagia. The aim of this article is to review the development of ODTs, challenges in formulation, new ODT technologies and evaluation methodologies, suitability of drug candidates, and future prospects.

PCU 015

TRANSFEROSOMES – A REVIEW

Md.Zeeshan*, Y.V. Dhanunjaya, M. Koushik Bhandari, P. Ravi Prakash

Dep. of Pharmaceutics, Creative Educational Society's College of Pharmacy, Kurnool, AP.

Email ID: zeeshanmd47@gmail.com

Transferosomes were ultra deformable vesicles, elastic in nature which can squeeze itself through a pore which is many times smaller than its size owing to its elasticity. Transferosomes possess an infrastructure consisting of hydrophobic and hydrophilic moieties together and as a result can accommodate drug molecules with wide range of solubilities. Transferosomes are composed of phospholipids, surfactants and water for enhanced release. They can deform and pass through narrow constrictions (from 5 to 10 times less than their own diameter) without measurable loss. The system can be characterized by in vitro for vesicle shape and size, entrapment efficiency, degree of deformability, number of vesicles per cubic mm. Flexibility of transferosomes membrane is achieved by mixing suitable surfactants in proper ratios. They have beneficial advantage over other vesicular systems, such as their high penetration power across skin, higher stability, systemic drug release possible and higher deformability than other vesicular systems such as liposomes, niosomes, etc.

Key words: Ultra deformable vesicles, elastic hydrophobic deformable, liposomes, neosomes.

PCU 016

ETHOSOMES A NON-INVASIVE APPROACH FOR TRANSDERMAL DRUG DELIVERY

Mounika Janwad*

Sarojini Naidu Vanita Pharmacy Mahavidhyalaya, Tarnaka, Hyderabad.

EMAIL ID: Mounikajanwad@gmail.com

Ethosomes are noninvasive delivery carriers that enable drugs to reach the deep skin layers and/or the systemic circulation. Although ethosomal systems are conceptually sophisticated, they are

characterized by simplicity in their preparation, safety and efficacy a combination that can highly expand their application. Ethosomes are soft, malleable vesicles tailored for enhanced delivery of active agents. This article reviews various aspects of ethosomes including their preparation, characterization, potential advantages and their applications in drug delivery. Because of their unique structure, ethosomes are able to encapsulate and deliver through the skin highly lipophilic molecules such as cannabinoids, testosterone, and minoxidil, as well as cationic drugs such as propranolol, trihexyphenidil, Cyclosporine A, insulin, salbutamol etc. Ethosomes provides a number of important benefits including improving the drug's efficacy, enhancing patient compliance and comfort and reducing the total cost of treatment. Enhanced delivery of bioactive molecules through the skin and cellular membranes by means of an ethosomal carrier opens numerous challenges and opportunities for the research and future development of novel improved therapies.

Key words: Ethosomes, Minodixil, transdermal drug delivery.

PCU 017

“SMART INSULIN PATCHES” AND ITS RECENT ADVANCES

J. Prasanna Kumari*

Sarojini Naidu Vanita Pharmacy MahaVidyalaya, Tarnaka, Secundrabad

Email ID: prasannadolly7@gmail.com

A “smart insulin patch” that could potentially dispel the need for painful insulin injections for millions of people worldwide with diabetes. It employs painless microneedles to sense the low oxygen environment created when glucose levels rise and then delivers insulin as required. The insulin patch works by mimicking the body's own system for generating insulin - the beta cells of the pancreas - which produce and store insulin in tiny sacs or vesicles. They also sense changes in blood sugar and signal insulin to be released from the vesicles as needed. The smart patch looks like a square sliver of tape no larger than a penny - has more than a hundred microneedles, each about the size of an eyelash, containing tiny reservoirs of insulin and glucose-sensing enzymes. The device which can be placed anywhere on the body, senses when blood glucose level gets high and rapidly releases the right amount of insulin into the body.

Key words: Microneedles, glucose sensing enzymes, Mimicking, vesicles, beta cells

PCU 018

A REVIEW OF NANOPARTICLES

Jogineni Vasantha*, Dereddy Sudha Rani, K. Aruna Jyothi

Dept. of Pharmaceutics, Creative Educational society's college of pharmacy, Kurnool, A.P

Email ID: dereddysudha562@gmail.com

Recently particulate systems like nanoparticles have been used as a physical approach to alter and improve the pharmacokinetic and pharmacodynamic properties of various types of drug molecules. They have been used in vivo to protect the drug entity in the systemic circulation, restrict access of the drug to the chosen sites and to deliver the drug at a controlled and sustained rate to the site of action. Drug delivery research is clearly moving from the micro- to the nanosize scale.. The development of effective nanodelivery systems capable of carrying a drug specifically and safely to a desired site of action is one of the most challenging tasks of pharmaceutical formulation investigators. They are attempting to reformulate and add new indications to the existing blockbuster drugs to maintain positive scientific outcomes and therapeutic breakthroughs. The nanodelivery systems mainly include nanoemulsions, lipid or polymeric Nanoparticles and liposomes. Nanoparticles have been improving the therapeutic effect of drugs and minimize the side effects. Basically, Nanoparticles have been prepared by using various techniques as such dispersion of preformed polymers, polymerization of monomers and ionic gelation or co-accreration of hydrophilic polymer

Key words: Nanoparticles, Nanotechnology, Polymeric Nanoparticles, Particulate

PCU 019

TRANSUNGUAL DRUG DELIVERY SYSTEM AND ITS TREATMENT FOR NAIL FUNGAL INFECTIONS

C.Y.Priyanka*, B. Jaya Laxmi

Teegala Krishna Reddy College of Pharmacy, Saroornagar, Hyderabad.

Email ID: hemanthkumar034@gmail.com

The body normally hosts a variety of micro organisms including bacteria and fungi. Some of these are useful to the body and others may cause infections. Fungi can live on dead tissues of hairs, nails. Continuous exposure of nails to warm environment usually causes nail infections. Nail plate is the main route for penetration of the drug. The nail lacquer is the new drug delivery system in the treatment of nail infections like onychomycosis, psoriasis, paronychia. Topical therapy is desirable in the treatment of nail diseases like onchomycosis (fungal infection). The present review is an attempt to

discuss different physical and chemical methods employed to increase the permeability of nail plate. Penetration topical antifungal through the nail plate requires a vehicle that is specifically formulated for transungual delivery. These attempts are on to search suitable physical and chemical transungual enhancers in the view to maximize the drug delivery across nail plate.

Key words: Nail, nail plate, transungual, drug delivery, permeation, lacquers, onychomycosis, psoriasis, paronychia.

PCU 020

NANOROBOTS IN PHARMACY

G. Mounika*, N. Sirisha

Teegala Krishna Reddy College of Pharmacy, Saroornagar, Hyderabad.

Email ID: gampamonica@gmail.com

Nanomedicine is the medical application of nanotechnology. Nanomedicine ranges from the medical applications of nanomaterials and biological devices, to nanoelectronic biosensors, and even possible future applications of molecular nanotechnology such as biological machines. Nanorobots are the machines which could re-order matter at a molecular or atomic scale and are introduced into the body, to repair or detect damages and infections. Examples of such nanorobots are **Respirocytes** (artificial mechanical red cells; **Microbivores** (artificial mechanical white cells), **Clottocytes** (artificial mechanical platelets), **Pharmacytes** (ideal drug delivery nanorobots), **Chromalloytes** (chromosome exchange therapy). Their nanomedical applications are cardiovascular repair; treatments for pathogenic disease and cancer; responses to physical traumas, burns and radiation exposures, with new methods of first aid, surgery, and emergency or critical care; neurography, spinal restoration etc.

Key word: Nanorobots, respirocytes, microbivores, clottocytes, chromalloytes, pharmacytes, applications.

PCU 021

NIOSOMAL DRUG DELIVERY FOR TRANSDERMAL TARGETING SYSTEM

Mounika Reddy*

Joginpally B.R. Pharmacy College Yenkapally(v), Moinabad(m), Rangareddy Dist.

Email ID: ishilsagi@gmail.com

Niosomes are non-ionic surfactant-based vesicular nanocarriers having potential transdermal drug delivery systems due to properties such as enhanced drug penetration, local depot for sustained

drug release, and a rate-limiting membrane for modulation of systemic absorption of drug via skin. These carriers are suitable for the transdermal delivery of numerous pharmacological agents, including antioxidants, anticancer, anti-inflammatory, antimicrobial and antibacterial molecules. This presentation attempts to provide an exhaustive collection of special emphasis on the strategies used to enhance the potential of niosomes.

PCU 022

SIMULTANEOUS ESTIMATION OF EPROSARTAN AND HYDROCHLOROTHIAZIDE IN ITS BULK PHARMACEUTICAL DOSAGE FORM.

Mohd Abu Talha*, Syed Vakeel Uddin, Khatija Mohammed Bahmeshan, Nikhat Jahan

Deccan School of Pharmacy, Hyderabad, Telangana.

Email ID: mohdtalha716@gmail.com

A new method was established for simultaneous estimation of Hydrochlorothiazide and Eprosartan by RP-HPLC method. The chromatographic conditions were successfully developed for the separation of Hydrochlorothiazide and Eprosartan by using AgilentC18 column (4.6×150mm) 5 μ , flow rate was 1ml/min, mobile phase ratio was (70:30 v/v) methanol: ACN, detection wavelength was 274nm. The instrument used was WATERS HPLC Auto Sampler, Separation module 2695, photo diode array detector 996, Empower-software version-2. The retention times were found to be 1.866 mins and 2.496 mins. The % purity of Hydrochlorothiazide and Eprosartan was found to be 99.87% and 100.27% respectively. The system suitability parameters for Hydrochlorothiazide and Eprosartan such as theoretical plates and tailing factor were found to be 4260, 1.2 and 5085 and 1.2, the resolution was found to be 7.67. The analytical method was validated according to ICH guidelines (ICH, Q2 (R1)). The linearity study of Hydrochlorothiazide and Eprosartan was found in concentration range of 50 μ g-250 μ g and 15 μ g-55 μ g and correlation coefficient (r^2) was found to be 0.999 and 0.999, % recovery was found to be 98.56% and 99.96%, %RSD for repeatability was 1.2, % RSD for intermediate precision was 1.9. The precision study was precision, robustness and repeatability. LOD value was 3.72 and 0.0242 and LOQ value was 7.40 and 0.0202 respectively. Hence the suggested RP-HPLC method can be used for routine analysis of Hydrochlorothiazide and Eprosartan API and Pharmaceutical dosage form.

Key words: Hydrochlorothiazide, Eprosartan

PCU 023

USE OF ANODIZED TITANIUM ALLOY AS DRUG CARRIER: IBUPROFEN AS MODEL OF DRUG RELEASING

V. Seshavardhan*

Department of Pharmaceutics, Joginpally B.R. Pharmacy College

Email ID: vardhanvajja99@gmail.com

The use of osteoarticular implants has improved the quality of millions of patients in this work. nanotubular structures tailored made on Ti6Al4 V substrates was used as drug delivery system of ibuprofen as a proof of concept the three different nanotubular films with different sizes and forms were analysed. This method is analysed by order of kinetics, the results obtained shows the potential of these modifications in order to develop implants that can carry different molecules of medical importance.

PCU 024

NANO GELS: A NOVEL DRUG DELIVERY CARRIER

Syed Vakeeluddin *, Khatija Mohammed Bhameshan, Mohd Abu Talha, Nikhat Jahan.

Department of PA and QA, Deccan School of Pharmacy, Aghapura, Hyderabad-500028.

Email ID: dazzlingaurora53@gmail.com

A nanogel is a nanoparticle composed of a hydrogel – a crosslinked hydrophilic polymer network. nanogels are most often composed of synthetic polymers or biopolymers which are chemically or physically crosslinked. nanoparticle-based drug delivery formulations can improve the effectiveness and safety of drugs, due to their chemical composition. targeted nanogel drug delivery platform can (i) encapsulate a wide range of drug chemotypes, including biological, small molecule, and cytotoxic agents; (ii) display targeting ligands and polymeric coatings on the surface; (iii) enhance drug retention within the nanogel core after photo-cross-linking; and (iv) retain therapeutic activity after lyophilization allowing for long-term storage. Recent studies suggested several promising biomedical applications of nanogels, including drug delivery of phosphorylated nucleoside analogs, oligonucleotides or siRNA for anticancer or antiviral treatment, encapsulation of bioactive proteins, fabrication of nanometallic or nanoceramic composites, imaging agents, oral and CNS drug delivery. The research of different functional nanogels as novel pharmaceutical carriers for diagnosis and therapy shows promising results and is rapidly developing.

Key words: Nanogels; synthetic polymers, biopolymers, chemotypes, cytotoxic agents, ligands, lyophilization, phosphorylated nucleoside analogs, oligonucleotides, bioactive proteins, nanometallic, nanoceramic.

PCU 025

SOLID LIPID NANOPARTICLES AS A VEHICLE FOR BRAIN-TARGETED DRUG DELIVERY: TWO NEW STRATEGIES OF FUNCTIONALIZATION WITH APOLIPOPROTEIN E

Mehjabeen Unnisa*, Umme Romana Ghouse

Mesco College OF Pharmacy

Email ID: mehjabeen_unisa@yahoo.com

The blood–brain barrier is almost impermeable and dynamic system that protects the brain against pathogenic organisms, harmful substances while supplying the brain with nutrients for proper function. Only lipid-soluble molecules with a molecular weight of about 450 daltons can cross the BBB by passive diffusion which reduces the number of drugs that can enter the CNS. The conventional drug delivery systems that release a drug into the systemic circulation fail to deliver it effectively to brain; therefore there is need to develop and design a specific target to brain in better and effective way for the treatment of brain diseases. Solid lipid nanoparticles (SLNs) have shown to be very promising for drug delivery in brain. ApoE-coupled nanoparticles may mimic lipoprotein particles (like LDL) that are endocytosed into the BBB endothelium and transcytosed through the BBB endothelium into the brain. There is a new system of drugs to enter the brain by functionalizing SLN with apolipoprotein E, aiming to enhance their binding to low-density lipoprotein receptors on the BBB endothelial cells. SLN's were successfully functionalized with apolipoprotein E using two distinct strategies that took advantage of the strong interaction between biotin and avidin. The functionalization was demonstrated by infrared spectroscopy and fluorimetric assays. The brain permeability was evaluated in transwell devices with hCMEC/D3 monolayers and a 1.5-fold increment in barrier transit was verified for functionalized nanoparticles when compared with non-functionalized ones. The results suggested that these novel apolipoprotein E-functionalized nanoparticles resulted in dynamic stable systems capable of being used for an improved and specialized brain delivery of drugs through BBB.

PCU 026

RHEOPEXY OF SYNOVIAL FLUID AND PROTEIN AGGREGATION

Srujitha Ravula*, Pallavi. K

G. Pulla Reddy College of Pharmacy, Hyderabad, Telangana – 500028

Email: ravula.srujitha@gmail.com

Bovine synovial fluid and albumin solutions of similar concentration are rheopectic (stress increases with time in steady shear). This unusual flow characteristic is caused by protein aggregation, and the total stress is enhanced by entanglement of this tenuous protein network with the long-chain polysaccharide sodium hyaluronate under physiological conditions. Neutron scattering measurements on albumin solutions demonstrate protein aggregation and all measurements are consistent with a weak dipolar attraction energy (of order $3kT$) that is most likely augmented by hydrophobic interactions and/or disulfide bond formation between proteins. Protein aggregation appears to play an important role in the mechanical properties of blood and synovial fluid. We also suggest a connection between the observed rheopexy and the remarkable lubrication properties of synovial fluid.

PCU 027

EDIBLE VACCINES

M. Soundaryalalitha*, Padmavathi. R

G. Pulla Reddy College of Pharmacy, Mehdiapatnam.

Email ID: slmaganty@gmail.com

Vaccines were the result of trial and error research until molecular biology and genetic engineering made possible the creation of many new and improved vaccines. New vaccines need to be inexpensive, easily administered, and capable of being stored and transported without refrigeration; without these characteristics, developing countries find it difficult to adopt vaccination as the central strategy for preventing their most devastating diseases. The authors describe a promising approach to inexpensive and effective vaccines: producing them in plants we commonly consume.

PCU 028

NASAL DRUG DELIVERY SYSTEM - AN OVERVIEW

S. Uzma Shireen*

Creative Educational Society's College of Pharmacy, Kurnool – 518128

Email ID: uzmafireen61@gmail.com, Ph.7675829792

The use of the nasal route for the delivery of challenging drugs such as small polar molecules, vaccines, hormones, peptides and proteins has created much interest in nowadays. Due to the high permeability, high vasculature, low enzymatic environment of nasal cavity and avoidance of hepatic first pass metabolism are well suitable for systemic delivery of drug molecule via nose. Many drug delivery devices for nasal application of liquid, semisolid and solid formulation are investigated to deliver the drugs to the treat most crisis CNS diseases (i.e., Parkinson's disease, Alzheimer's disease) because it requires rapid and/or specific targeting of drugs to the brain. It is well suitable for the delivery of biotechnological products like proteins, peptides, hormones, DNA plasmids for DNA vaccines to give enhanced bioavailability. This review sets out to discuss some factors affecting nasal absorption, bioavailability barriers, strategies to improve nasal absorption, new developments in nasal dosage form design and applications of nasal drug delivery system.

Key words: Nose; peptides and proteins; vaccines; bioavailability; nasal drug delivery.

PCU 029

NANOSPONGES: A NOVEL APPROACH FOR DRUG DELIVERY

P. Rajeshwari*, M. Vijaya laxmi, M.Malleswari

Teegala Krishna Reddy College of Pharmacy, Hyderabad

Email ID: rajeshwarichary123@gmail.com

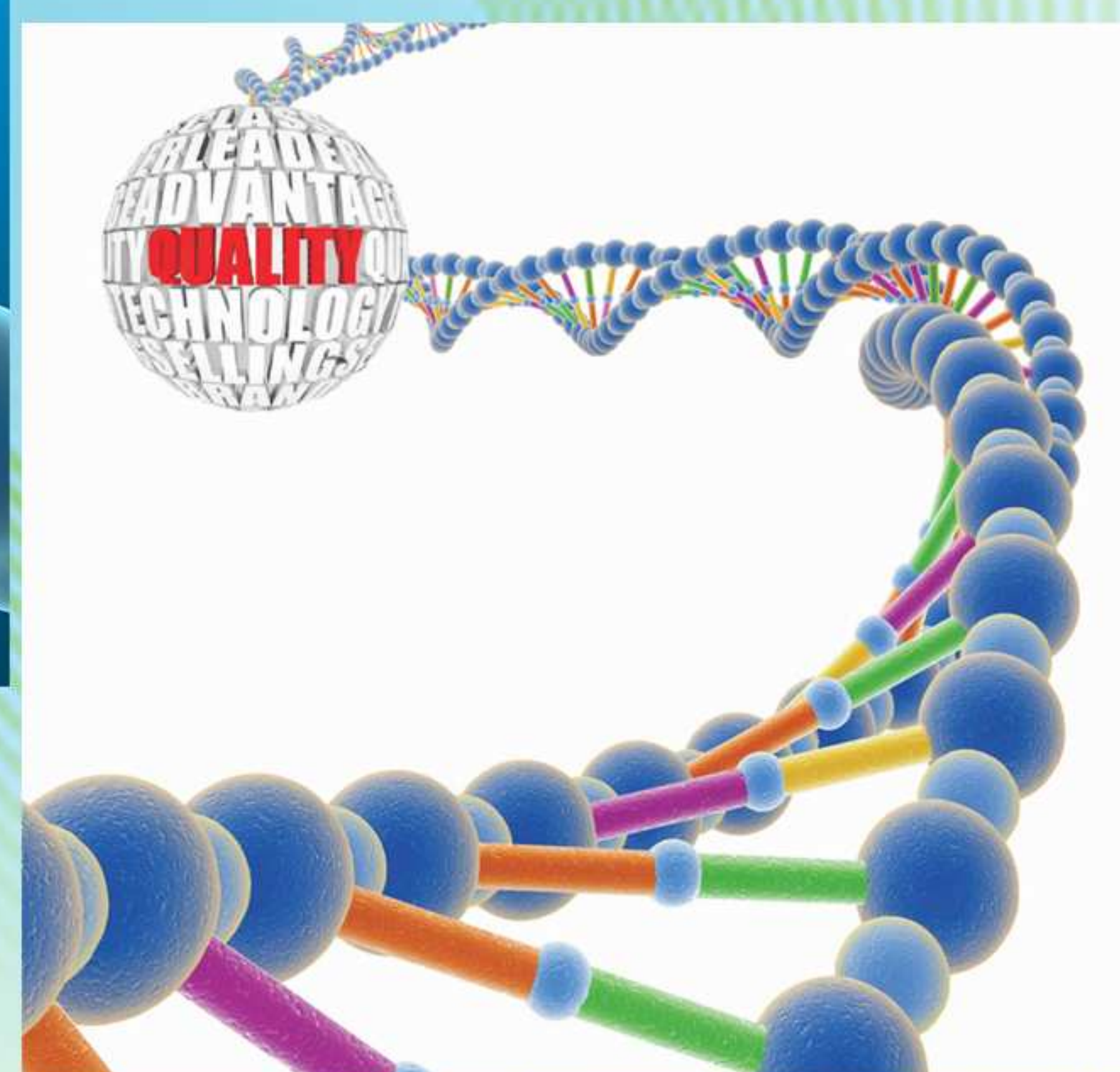
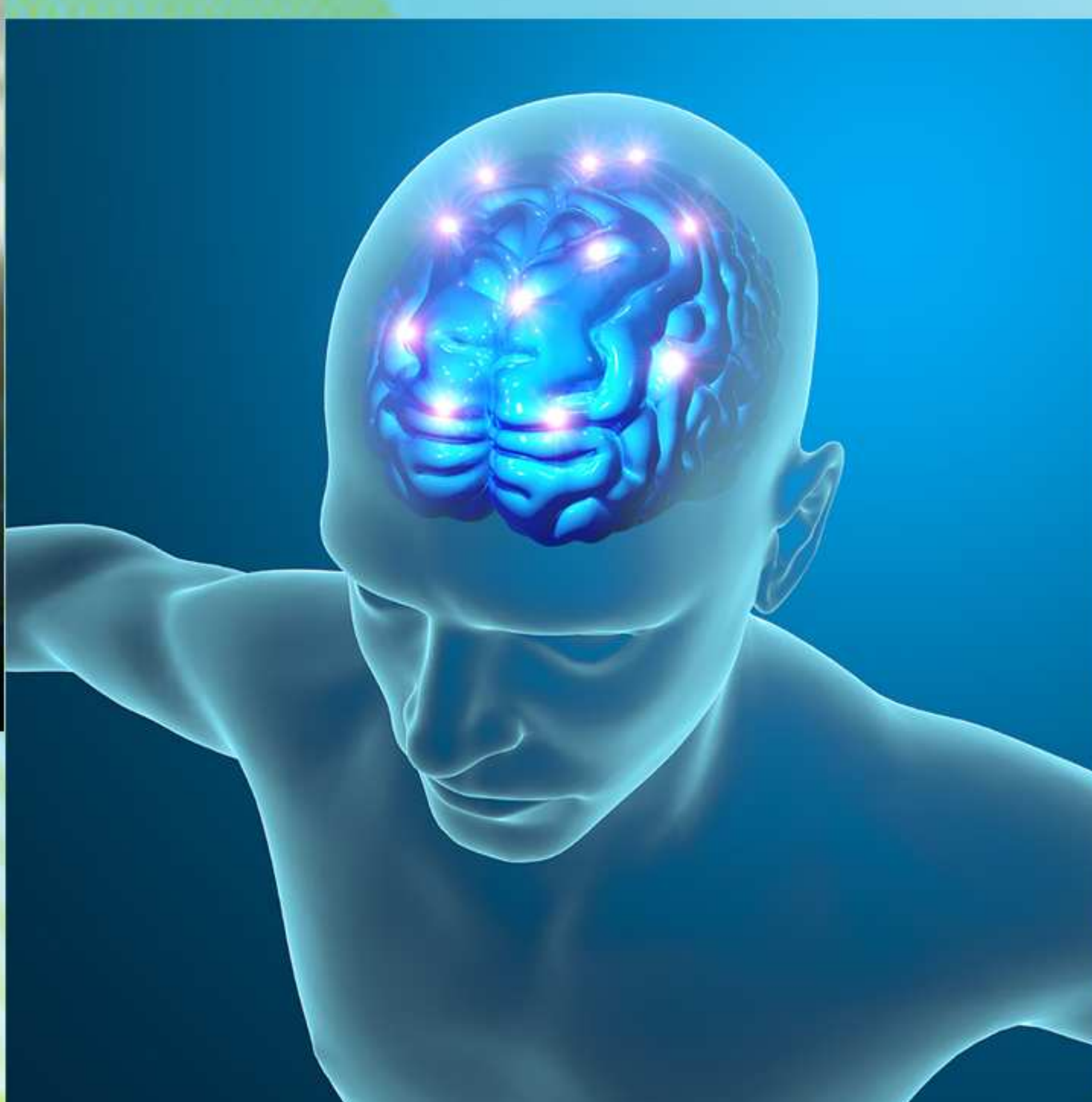
The advent of nanotechnology lead to invention of many dosage forms. A nanosponge technology has been introduced to facilitate controlled release of drugs over the time in order to reduce systemic toxicity and severe reactions. "Nanosponge" uses a nanoparticle-sized system to deliver the drug payload. The sponge acts as a three-dimensional network or scaffold. The backbone is long-length polyester the development of new colloidal carrier called nanosponges has the potential to solve these problems. Nanosponge is a novel and emerging technology which offers controlled drug delivery for topical use. This sponge can circulate around the body until interact with specific target site and stick on surface and start releasing drug in a controlled manner. Nanosponge delivery system (NDS) provides increased efficacy with enhanced safety, extended product stability, improved formulation

flexibility, reduced side effects and superior aesthetic properties in an efficient and novel manner. Adding up they are non-irritating, nonallergenic and non-toxic. In short nanosponges encompass many favorable characteristics which make them a versatile drug delivery vehicle.

Key words: Nano sponges, flexibility, non-allergic etc.

One Day National Seminar on
“INNOVATIONS IN PHARMACEUTICAL RESEARCH- 2016”
AND POSTER PRESENTATIONS- 06th February 2016

PHARMACOLOGY



Organized By
G. PULLA REDDY COLLEGE OF PHARMACY

PCL 001

INFLAMMATORY BOWEL DISEASE (IBD) - PHARMACOLOGICAL ASPECTS

Ayesha Habeeb*, Hafsa Hani

Deccan School of Pharmacy, Hyderabad, Telangana – 500001

Email ID: starangel9517@gmail.com

Inflammatory bowel disease (IBD) includes both Ulcerative colitis(UC)and Crohn's disease(CD) and is associated with chronic inflammation of various areas of GI tract. Ulcerative colitis is an inflammatory bowel disease that causes long lasting inflammation in the part of GI tract. Crohn's disease is inflammatory bowel disease that causes inflammation anywhere along the lining of the digestive tract, and often spreads deep into the affected tissues. When designing the treatment regimen several factors should be considered i.e., patient's symptoms, medical history, current medication use, drug allergies and severity of the disease. The pharmacological therapy includes the drugs like Prednisone, Hydrocortisone, Sulphasalazine, Olsalazine, Methylprednisolone, Budasonide, Prednisolone, Mesalamine. The nonpharmacological therapy includes avoidance of high-residue foods in patients and strictures may help to prevent obstruction. Administration of Vitamin B12, Folic acid, Fat soluble vitamins and iron may be needed to prevent or treat deficiencies. Tumor necrosis factor, a proinflammatory cytokine plays an important role in the pathogenesis of Inflammatory bowel disease(IBD), a humanized monoclonal anti-TNF antibody(CDP571) and a recombinant TNF receptor function protein(etanercept) have been used to inhibit TNF activity. Dietary n-3 fattyacids to the ulcerative colitis patients are under trial.

Key words: Inflammatory bowel disease, Ulcerative colitis, Crohn's disease, Arthritis, Humanized monoclonal anti-TNF antibody (CDP571), recombinant TNF receptor function protein (etanercept).

PCL 002

BIOLOGICAL PACEMAKER

S. Madhavi*

G. Pulla Reddy College of Pharmacy, Hyderabad– 500 028

Email ID: madhavi.bts@gmail.com

The pacemaker is a device that senses when the heart is beating irregularly or too slowly. It sends a signal to heart & makes the heart beat at correct pace. An artificial pacemaker is an implanted device that mimics the action of nodes and conducting system thus regulating the heart rate. It is a small battery operated computer called PULSE GENERATOR. Biological pacemaker created by minimally invasive somatic reprogramming or genetic therapy technique using appropriate vectors or by stem cell therapy. This method includes insertion of particular gene and transforming the heart cells into new pacemaker that can restore the missing heart beats. It replaces the action of heart's natural pacemaker when it is not fast enough or if there is block in electrical conduction and incase of electronic pacemaker infection. It has delivery systems such as viral vectors, human embryonic stem cell and human mesenchymal stem cells. It proves to be very effective cure for paediatric patients and who face a life time of device changes. Regeneration or recreation of normal pacemaker function is preferable than fixing it artificially, as electronic devices always cannot really follow human Physiology.

Key words: Pacemaker, Conducting system, Pulse generator, Somatic reprogramming, Gene therapy, Stem cell therapy, Embryonic and Mesenchymal cell, Regeneration.

PCL 003

PHARMACOLOGY BIOASSAYS FOR DRUG DISCOVERY, TOXICITY EVALUATION AND IN VITRO CANCER RESEARCH USING A 3D NANOCELLULOSE SCAFFOLD AND LIVING TISSUE

P. Manjusha*

G. Pulla Reddy College of Pharmacy, Hyderabad – 28, Telangana

Email ID: a4manjusha@gmail.com

The present invention relates to pharmacology bioassays used in drug discovery, drug screening and toxicity evaluations. More specifically, the present invention relates to novel systems and methods used for production and control of 3-D architecture and morphology of living tissues and organs produced by mammalian cells using 3D porous scaffolds based on nano-cellulose. The resultant nano-cellulose based structures are useful as tools in high throughput assays for drugs. More particularly, embodiments of the present invention relate to systems and methods for evaluating a drug that comprise a microtiter plate comprising a plurality of wells, each well comprising: a 3D non-biodegradable, inert, nano-cellulose scaffold; and optionally cells capable of forming living tissue or organs; and optionally a drug having a biological activity of interest; and optionally a detector capable of detecting the biological activity in a high throughput format.

PCL 004

HEPATOPROTECTIVE ACTIVITY OF ZIZYPHUS JUJUBA LEAF EXTRACT AGAINST CARBON TETRACHLORIDE INDUCED HEPATOTOXICITY IN RATS

Vidhya Swetha. M*, U. PushpaLatha

Dept. of Pharmacology, Creative Educational Society's College of Pharmacy, Kurnool, A.P.

Email ID: vidhyaswetham122@gmail.com

The ethanolic extract of *Zizyphus jujuba* leaves were screened for its hepatoprotective activity in CCl₄ (1.25 ml/kg, oral) induced liver damage in male wistar rats at a dose of 200 and 400 mg /kg bw. The ethanolic extract of *Z.jujuba* significantly ($P<0.01$) decreases the serum enzyme alanine amino transferase (ALT), aspartate amino transferase (AST), alkaline phosphates (ALP), triglycerides (TGL), total cholesterol (TC), total bilirubin (TB), total protein (TP) and significantly increased the glutathione level. Silymarin (100 mg/kg), a known hepatoprotective drug used for comparison exhibited significant activity ($P<0.01$).

Key words: *Zizyphus jujuba*; CCl₄; Hepatoprotective activity.

PCL 005

**ANTI – ARTHRITIC ACTIVITY OF ETHANOL EXTRACT OF BARK OF
TEPHROSIA PURPUREA IN FREUND'S ADJUVANT INDUCED ARTHRITIC
RATS**

L. Abhinaya * H G Raghavendra

Creative Educational Society's College of Pharmacy, Kurnool

Email ID: rohitha235gandla@gmail.com

Anti-arthritis effect on oral administration of ethanol extract of bark of *Tephrosia purpurea* (ETP) was studied in Wistar albino rats on Freund's adjuvant induced arthritis. The extract at doses 250 mg / kg b.w. and 500 mg / kg b.w. were termed as low and high doses respectively and the drug diclofenac sodium was used as standard. Swelling of paws and loss of body weight was markedly reduced on treatment with ETP and the activity was found dose dependent. And the anti-arthritis activity of ETP was supported by hematological & bio-chemical parameters, radiographic analysis and histopathological evaluations and the activity is mostly found prominent after 14th day of its administration. The effect may be attributed to the phytochemicals like steroids, flavonoids, alkaloids etc., present in ETP.

Key words: Anti-arthritis, Freund's adjuvant.

PCL 006

POSTTRAUMATIC STRESS DISORDER (PTSD)

G.I. Mounika*, H.G. Raghavendra

CES College of Pharmacy, Kurnool, AP.

Email ID: mounikagiskala@gmail.com

Post-traumatic stress disorder is caused by significant trauma in a person's life that is left unresolved. While PTSD is commonly associated with members of the military, anyone who has experienced trauma in life can develop PTSD at any age. PTSD is classified as an anxiety disorder in which a person's normal response to danger becomes distorted. After going through a traumatic event, the affected individual may be triggered and have a fight-or-flight response long after the event has passed. That affects millions of Americans every year. Government statistics indicate that 3.5 percent of the general population suffers from PTSD. Hyperresponsiveness in the norepinephrine system can be caused by continued exposure to high stress. Over activation of norepinephrine receptors in the prefrontal cortex can be connected to the flashbacks and nightmares frequently experienced by those with PTSD. Numerous therapies are available for the treatment of post-traumatic stress disorder. Some of the most common therapies used to treat PTSD include group therapy, psychotherapy, cognitive behavioral therapy and hypnotherapy. In some cases, doctors will recommend a combination of one or more therapeutic approaches in order to meet the needs of the individual patient.

PCL 007

ROLE OF HIGHER-FAT DASH DIET IN BLOOD PRESSURE AND TRIGLYCERIDES

Javed Akhtar Ansari*, Syed Raziuddin Faisal, Syed AfzaluddinBiyabani

Department of PharmD, MESCO College of Pharmacy, Hyderabad, TS – 500008

Email ID: javed.ansari47@gmail.com

The Dietary Approaches to Stop Hypertension (DASH) dietary pattern, which is high in fruits, vegetables and low fat dairy foods, significantly lowers blood pressure as well as low-density lipoprotein cholesterol (LDL-C) and high-density lipoprotein cholesterol. In a study to be published in the American Journal of Clinical Nutrition, researchers at the UCSF Benioff's Children's Hospital Oakland Research Institute (CHORI) found that a higher fat DASH diet lowered blood pressure to the same extent as the DASH diet, but also reduced triglycerides and did not significantly raise LDL-C. The study "Comparison of the DASH (Dietary Approaches to Stop Hypertension) diet and a higher-fat DASH diet on blood pressure and lipids and lipoproteins: a randomized controlled trial," tested the effects of substituting full-fat for low-fat dairy foods in the DASH diet on blood pressure and plasma lipids and lipoproteins. The DASH diet was originally developed as a means for lowering blood pressure, and was designed to include low-fat and nonfat dairy foods. When substituted for carbohydrates or unsaturated fats, saturated fats have been consistently shown to increase LDL-C. Blood pressure was reduced similarly in the DASH and HF-DASH diet compared to the Control diet. The HF-DASH diet significantly reduced triglycerides and large and medium sized very low-density lipoprotein particles in comparison with the DASH diet, and there was no significant difference in LDL-C response between these diets. Therefore the modified HF-DASH diet presents an effective alternative to the widely recommended DASH diet, with less stringent dietary fat constraints that may promote even broader implementation.

PCL 008

STEM CELL THERAPY FOR DIABETES

Syed Raziuddin Faisal*, Syed AfzaluddinBiyabani, Javed Akhtar Ansari

Department of PharmD, MESCO College of Pharmacy, Hyderabad, TS – 500008

Email ID: raziu3886@gmail.com

The increasing burden of diabetes worldwide is well-known, and the effects on health care costs and in human suffering, morbidity, and mortality will be primarily felt in the developing nations including India, China, and countries in Africa. Stem cell therapy holds immense promise for the treatment of patients with diabetes mellitus. Research on the ability of human embryonic stem cells to differentiate into islet cells has defined the developmental stages and transcription factors involved in this process. However, the clinical applications of human embryonic stem cells are limited by ethical concerns, as well as the potential for teratoma formation. As a consequence, alternative forms of stem cell therapies, such as induced pluripotent stem cells, umbilical cord stem cells and bone marrow-derived mesenchymal stem cells, have become an area of intense study. Recent advances in stem cell therapy may turn this into a realistic treatment for diabetes in the near future. Keywords: Embryonic stem cell, Pluripotent stem cell, Mesenchymal stem cell, Diabetes.

PCL 009

BIO-CHEMICAL ANGIOPLASTY

Syed AfzaluddinBiyabani*, Syed Raziuddin Faisal, Javed Akhtar Ansari

Department of PharmD, MESCO College of Pharmacy, Hyderabad, TS – 500008

Email ID: biyabani786786@gmail.com

A mixture of biochemical (all safe for the body and in correct dosage) now has shown results of reduction of coronary blockages when passed through the body. These chemicals mainly contain chemicals like Anti-oxidants, EDTA, Vitamins, Isotonic carrier, PH balancing drugs. All of them are injected in the patient through intravenous route for a period of two and half hours to obtain softening of the blockage and a gradual reduction of blockage. The results become apparent within six to ten infusions. The dosages of the chemicals vary from person to person; and an experienced doctor has to decide which patients could be treated with this treatment. Though this kind of therapy is being used by a lot of practitioners abroad and in India using different kinds of chemicals it has not been promoted by the heart hospital system. The main reason being that this is not so lucrative. Though it was not so effective initially the improvement came after the chemicals used to soften the blockage and withdraw it, was changed. Today Saaol (Heart Institute) uses are the best of the combination. The results of the Biochemical Angioplasty become more effective if it is used along with Lifestyle changes (Food, Exercise, Yoga, Stress Management, Lowering of blood sugar and fats). This therapy has minimal invasion involved in it. No admissions are required, the cost is very low. In some people the result comes very fast i.e. within three weeks. The angina will be gone and the patient becomes free from Angina. Till now it was in experimental stage but now started using it in Delhi clinic only, starting from August, 2006.

PCL 010

VITAMIN DEFICIENCY

Haindavi Reddy*

Gurunanak College of Pharmacy

Email ID: haindhavi96@gmail.com

Vitamins are organic compounds required by the body in trace amounts to perform specific function and cannot be synthesized by humans. Vitamins are of two types fat soluble and water soluble. Fat soluble are A, D, E and K and water soluble are B and C. There are many disorders by vitamin deficiency like vitamin A deficiency causes night blindness. Vitamin B5 deficiency causes paraesthesia. Vitamin K which is mostly found in green vegetables its deficiency affects nearly half of all newborn infants worldwide. Vitamin B12 deficiency causes hypcobalaminemia (deterioration of spinal cord and brain) this is present in meat, dairy, eggs. As we all know vitamin D deficiency causes rickets. Vitamin B2 deficiency causes ariboflavinosis (malnutrition and alcoholics). Vitamin C deficiency causes scurvy. Vitamin B1 deficiency causes beriberi. I want to conclude that more than using vitamin capsules and tablets we can reduce the deficiency by natural food. Modern views suggest that more quantities than RDIS might be needed to prevent some chronic diseases.

PCL 011

SMOKING AND ITS EFFECT

Murali Krishna*

Gurunanak School of Pharmacy.

Email ID: muralikrishchirumamilla444@gmail.com

Smoking is very dangerous to lungs it causes many effects on body. Smoking causes poor vision, high cholesterol, anxiety and irritability, coughing, lung cancer, bad teeth, infertility, cervical cancer, and problems with pregnancy, wrinkly skin, too much clotting, smelly hair, COPD, appetite suppression, mood stimulation.

PCL 012

THYROID DISORDERS

K. Bhargavi*

Gurunanak School of Pharmacy

Email ID: konduribhargavi958@gmail.com

Thyroid disorders like thyroid disorders include over active thyroid or hyperthyroidism and under active thyroid or hypothyroidism. Over active thyroid can make a person feel nervousness and unexpected weight loss. Under active thyroid can make a person feel tired, put on weight, depression. Other thyroid disorders may cause a harmless swelling or goitre. hypothyroidism poses a special danger to new borns and infants. Lack of thyroid hormones in early age can result in cretinism and dwarfism. A hypothyroid infant is unusually inactive and quite, has a poor appetite and sleeps for excessively long periods of time. Cancer of thyroid gland is quite rare.

PCL 013

A REVIEW ON MEDICATED TATTOOS

B. Shiva Kumar*, G. Madhan Mohan, Raj Kumar

CES College of Pharmacy, Chinnatekur, Kurnool, AP.

Email ID: siva140295@gmail.com

A transdermal medicament delivery device in the form of a printed temporary tattoo is which conceals the fact that the wearer is taking a drug. The ornamental appearance actually provides an incentive for wear. The medicated tattoo includes a section of cardstock base paper, a clear base bearing an ink design on one side, the clear base being attached to the cardstock base paper on the other side by a release base that dissolves when wet to allow detachment of the base paper, and an adhesive layer coated over the ink design on the clear base for adhesion to the skin. A medicament or drug is incorporated into the adhesive layer for diffusion there from into the skin of the wearer, and the adhesive layer has predetermined permeability characteristics to ensure effective transdermal delivery of the medicament. The process for making the transdermal tattoos includes lithographic printing and silk screen coating to create the necessary layers, inclusive of drug deposition on the control membrane. The net result is less susceptible to being dislodged, thereby allowing more conventional low-strength

skin adhesives to make intentional removal easy and painless. Moreover, the tattoo can provide an outward visual indication of the progress of delivery.

Key words: Transdermal medicament delivery, Medicated tatoos.

PCL 014

ROBOTIC RETINA

C Mounica*

G. Pulla Reddy College of Pharmacy, Hyderabad, Telangana

Email ID: cmounica08@gmail.com

There is huge number of people whose vision is not perfect, but they have glasses which aids in vision. But for those who are blind, devices that merely assist the eyes just aren't enough. India is home to the world's largest number of blind people. In 37 million people across the globe 15 million blind people are from India. India needs 2.5 lakhs donated eyes every year meanwhile; storage of donated eyes is becoming a huge problem. So there is a need for an alternative route by which the sights of the world can enter the brain and be interpreted. One such alternative is Bionic eye, also called as, artificial retina or Robotic retina. It is an electric device that can replace functionality of a part or whole of the eye and helps to restore vision to people who have lost sight during their life time. The Bionic eye also aims to restore basic visual cues to people suffering from eye diseases such as retinitis pigmentosa, which is a genetic eye condition. For achieving this, a microchip is implanted behind the retina of blind person. The patient would wear goggles mounted with a small video camera which will capture and process images which are sent wirelessly to bionic implant which stimulates dormant optic nerves to generate points of light that forms images in brain. Thus, this bionic eye has the ray of hope for the blind and development of this device ads life to blind people around the world.

PCL 015

POTENTIAL EPIDEMIC TRANSMISSION OF ZIKA VIRUS- A REVIEW

D. Ashritha*

Bharat Institute of Technology, Ibrahimpatnam, Telangana – 501510

Email ID: ashritha27596@gmail.com

After malaria dengue and chickungunya a new threat is being carried and transmitted by mosquitoes in the form of Zika virus for which no specific treatment is available as of now, but medicines such as painkillers and inflammatory drugs can be administrated for symptomatic relief. It was first isolated from a rhesus monkey in Uganda's Zika Forest in 1947. A sharp increase in the number of reported cases of microcephaly was reported in areas affected by the outbreak (USA). It is caused by Arbovirus of the Flavivirus family, which also includes the Dengue, West Nile and Japanese encephalitis viruses and is transmitted by Aedes mosquito; there are some evidences which support transmission of the virus by sexual intercourse. It causes an acute febrile illness similar to dengue fever, with potential symptoms including rash, inflammation of the joints and conjunctivitis. Zika virus Clinical symptoms last for 4-7 days which includes headache, muscle aches, maculopapular rash, fever, conjunctivitis, joint pain (mainly joints of the hands and feet) and diarrhoea. The main way to prevent

Zika infection is by preventing the importation and/or establishment of the mosquito that can carry the virus. Recent reports by WHO declare that Zika virus is spreading explosively in the Americans.

Key words: Flavivirus, Aedes mosquito, Arbovirus, Encephalitis Virus and Maculopapular rash.

PCL 016

Hhex PROTEIN

V.Shravani Sneha*, CH. Rajeswari

G. Pulla Reddy College of Pharmacy, Hyderabad, Telangana

Email ID: sneha.shravani@gmail.com

One-third of all childhood cancers are leukaemia, with approximately 400 new cases occurring each year in the UK. Less than a quarter of these are acute myeloid leukaemia (AML). AML can affect children of any age, and girls and boys are equally affected. Acute myeloid leukaemia is an over expression of immature myeloid white blood cells (blast cells). In AML, cells that have started to show some of the features of myeloid cells are said to show differentiation. The exact cause of AML is unknown. Children with genetic disorders such as Down's syndrome or Li-Fraumeni syndrome are known to have a higher risk of developing leukaemia. The treatment for AML is carried in different phases such as Induction, Post-remission treatment, Bone marrow transplant, CNS treatment. But a laboratory study found that the Hhex protein is over expressed in acute myeloid leukemia (AML) cells and is necessary for their propagation but not for normal myelopoiesis. Targeting Hhex could act to suppress AML proliferation without harming normal cells. Further testing showed that the protein is also necessary for maintenance of the disease.

PCL 017

RESEALED ERYTHROCYTE DRUG DELIVERY: A REVIEW

M. Govinda Raju*, M. Venkatesh, P. Rekha Rani

CES College of Pharmacy, kurnool, AP.

Email ID: manikindiraju666@gmail.com

Among the various carriers used for targeting drugs to various body tissues, the cellular carriers meet several criteria desirable in clinical applications, among the most important being biocompatibility of carrier and its degradation products. Leucocytes, platelets, erythrocytes, nanoerythrocytes, hepatocytes, and fibroblasts etc. have been proposed as cellular carrier systems. Among these, the erythrocytes have been the most investigated and have found to possess greater potential in drug delivery. Biopharmaceuticals, therapeutically significant peptides and proteins, nucleic acid-based biological, antigens, anticancer drug and vaccines, are recently focused pharmaceuticals for being delivered using carrier erythrocytes. Erythrocytes have been extensively studied for their potential carrier capabilities for the delivery of drugs. The biocompatibility, nonpathogenicity, non-immunogenicity and biodegradability make them unique and useful carriers. Carrier erythrocytes are prepared by collecting blood sample from the organism of interest and separating erythrocytes from plasma. By using various methods the cells are broken and the drug is entrapped into the erythrocytes, finally they are resealed and the resultant carriers are then called "resealed erythrocytes". So many drugs like aspirin, steroid, cancer drug which having many side effects are reduce by resealed

erythrocyte. Current review highlights isolation, drug loading methods, Evaluation methods and applications of resealed erythrocytes for drug delivery.

Key words: Resealed Erythrocytes, carrier, Isolation, Applications.

PCL 018

AN INFORMATIVE REVIEW ON TRANS ARTERIAL CHEMOEMBOLIZATION (TACE)

Kavi Soundarya*

Bharat Institute of Technology, Ibrahimpatnam, Telangana - 501510.

Email ID: kavisoundarya08@gmail.com

TACE is a technique launched by Yamada in patients with non-operable Hepatocellular Carcinoma (HCC), a targeted therapy. HCC is the fifth most common type of cancer which occurs in developing countries with a high ratio in Asia & Sub Sahara Africa. TACE is operated by Sedlinger technique, carried by an interventional radiologist. It exhibits both selective ischemic and therapeutic effects. This therapy is more beneficial than conservative or systemic chemotherapy as it does not cause tissue damage. TACE is performed by inserting a catheter into one of the major femoral arteries in the groin and is threaded into the aorta by injecting a major concentration of the drug to HCC and a minor concentration to non-tumorous part. The blood supply is prevented and tumor is starved to death. Infection can occur in the area of the liver treated, and would need treatment with intravenous antibiotic injections. TACE leads to a better survival and tumor response in comparison with chemotherapy due to exposure to high drug concentration and confining agents locally without carrying away by the blood stream. However, the treatment is not a cure for the tumor, but it helps to reduce the symptoms and suppress the growth of the tumor.

Key words: TACE, HCC, Sedlinger technique, Catheter, Systemic chemotherapy.

PCL 019

BRAINGATE TECHNOLOGY

M. Mounika*, R. Padmavathi

G. Pulla Reddy College of Pharmacy, Hyderabad, Telangana

Email ID: munigadapamounika@gmail.com

Braingate system has become a boon to the paralyzed. This is based on Cyber kinetics platform technology to sense, transmit, analyze and apply the language of neurons. The principle of operation behind the Brain Gate System is that with intact brain function, brain signals are generated even though they are not sent to the arms, hands and legs. The signals are interpreted and translated into cursor movements, offering the user an alternate Brain Gate pathway to control a computer with thought, just as individuals who have the ability to move their hands use a mouse. The 'Brain Gate' contains tiny spikes that will extend down about one millimeter into the brain after being implanted beneath the skull, monitoring the activity from a small group of neurons. It will now be possible for a patient with spinal cord injury to produce brain signals that relay the intention of moving the paralyzed limbs, as signals to an implanted sensor, which is then output as electronic impulses. These impulses enable the

user to operate mechanical devices with the help of a computer cursor. The system is also the first to allow a human to control his surrounding environment using his mind.

PCL 020

DRIED BLOOD SPOT TECHNIQUE

Harika Vithala*, A. Jayanthi, Dhiraj Kumar

Guru Nanak Institute of Pharmacy, Ibrahimpatnam-501 506

Email ID: vithalaharika36@gmail.com

The DBS Technique is a Dried Blood Spot Technique which is based on collecting blood spots on blotting paper and drying them. This Technique has many advantages like; it requires a lessinvasive sampling method which helps in clinical studies. Collection, Conservation and Storage of sample in DBS Technique is very convenient. Extraction of the analyte from the DBS specimens needs to be achieved using a standard procedure. DBS has many advantages in terms of sampling, transportation, storage and biosafety when compared to classical collection methods. One more interesting thing about DBS is that the possibility of simplified “self/home blood sampling”. This can be conveniently employed in different clinical and diagnostic tests.

PCL 021

STEM CELLS

Akshara Chennadi*

Gurunanak School of Pharmacy

Email ID: aksharasony2@gmail.com

Stem cells are a class of undifferentiated cells that are able to differentiate into specialized cell types. Stem cells come from two main sources embryonic stem cells and adult stem cells. Adult or somatic stem cells exit throughout the body after embryonic development and are found in different types of tissues. Adult stem cells can divide or self renew indefinitely. Embryonic stem cells are derived from a 4 or 5 day old human embryo that is in blastocyst phase of development. Stem cells are either extracted from adult tissue or from a dividing zygote in a culture dish. Stem cells are categorized by their potential to differentiate into other types of cells. Embryonic stem cells are most potent.

PCL 022

ZIKA VIRUS

G. Raja Meenakshi*, A. Madhulika Goud

Creative Educational Society of Pharmacy

Email ID: Udaykishore9494@gmail.com

ZikaVirus (ZIKV) is a flavivirus related to yellow fever, dengue, West Nile, and Japanese encephalitis viruses. In 2007 ZIKV caused an outbreak of relatively mild disease characterized by rash, arthralgia, and conjunctivitis on Yap Island in the southwestern Pacific Ocean. This was the first time that ZIKV was detected outside of Africa and Asia. The history, transmission dynamics, virology, and clinical manifestations of ZIKV disease are discussed, along with the possibility for diagnostic

confusion between ZIKV illness and dengue. The emergence of ZIKV outside of its previously known geographic range should prompt awareness of the potential for ZIKV to spread to other Pacific islands and the Americas.

Key words: Zika virus, Africa, flavivirus, transmission, virology, viruses, mosquito, synopsis

PCL 023

SWINE FLU

Shriya. N*

Sarojini Naidu Vanita Pharmacy Maha Vidyalaya, Tarnaka, Hyderabad – 500007

Email ID: nshriya1996@gmail.com

Swine influenza, also called pig influenza, swine flu, hog flu and pig flu. Swine flu (swine influenza) is a respiratory disease caused by viruses (influenza viruses). Normally infects only pigs but has begun to infect humans also. Swine flu is transmitted from person to person by inhalation or ingestion of droplets containing virus from people sneezing or coughing; it is not transmitted by eating cooked pork products. This presentation clearly explains how swine flu is caused, transmitted, symptoms, prevention, diagnosis, treatment, number of people infected by its worldwide every year, latest research carrying on to find more about this disease.

PCL 024

INTRANASAL INSULIN THERAPY FOR COMMON DISEASES OF AGEING

S. Farhana F.A*

Deccan School of Pharmacy

Email ID: smilingstar131@yahoo.com

Insulin resistance and amyloidogenesis appear as a common molecular foundation for two of the most common diseases of ageing i.e. Type-2 Diabetes mellitus and Alzheimer's disease. Therapy with insulin is effective at lowering blood glucose in patients with diabetes but there is resistance to its use as patients may hesitate to embrace multiple-dose injection regimens. There is also a risk of hypoglycemia. Insulin is also important for aging brains as insulin helps neurons manage their glucose usage and maintain synapses. Thus CSF insulin deficiency may contribute to expression of late-life neurodegenerative diseases such as Alzheimer's and acute Mild cognitive impairment. Inhaled insulin represents a breakthrough in insulin delivery as it differs not only in the route of administration thereby overcoming the need for painful injections but also in dosing units and patient eligibility. Apart from its role in managing diabetes, intranasal insulin improved certain measures of cognition and daily function, as well as biomarker profiles, in patients with mild cognitive impairment (MCI) or early Alzheimer's disease. Insulin, delivered intranasally with a nebulizer, boosted CSF insulin levels within 30 minutes and improved memory in young, healthy adults. Importantly, the treatment did not affect plasma glucose or insulin levels, suggesting that the nasal delivery targeted the brain while averting systemic side-effects. In another double-blind, placebo-controlled study of 24 amnesic MCI and early AD patients, 3 weeks of daily treatment with 20 IU intranasal insulin improved verbal recall without affecting peripheral glucose or insulin in treated participants (Reger et al., 2008).

PCL 025

NEPHRO PROTECTIVE EFFECT OF HIBISCUS PLANTIFOLIUS IN GENTAMICIN INDUCED NEPHROTOXICITY IN RATS

Y.Manisha*, H.G Raghavendra

Creative Educational Society's College of Pharmacy, Kurnool

Email ID: hymavathi333.b@gmail.com

Acute kidney injury, previously known as acute renal failure, encompasses a wide spectrum of injury to the kidneys, not just kidney failure. Acute kidney injury is increasingly being seen in primary care in people without any acute illness, and awareness of the condition needs to be raised among primary care health professionals. Acute kidney injury is seen in 13-18% of all people admitted to hospital, with older adults being particularly affected. Nephrotoxicity is the major adverse effect of different drugs. So it is a drug induced disease. This toxicity has been induced because of the release of the oxidants in kidney. Thus damaging or destructing the nephrons which are the basic functional units of kidney. The present study throws light on the effect of the plant Hibiscus in reducing the nephrotoxic effect that has been induced by gentamicin which is a broad spectrum antibiotic used to treat many ailments. This study gives the idea that when we use the plant along with the gentamicin like antibiotics will reduce the incidence of nephrotoxicity. Further detailed scientific investigation of the plant will be helpful in treatment of drug induced toxicity.

PCL 026

MALIVA - CHEWING GUM TO DETECT MALARIA

P. Ushasree*, Rajeswari Ch.

G. Pulla Reddy College of Pharmacy, Hyderabad, Telangana – 28

Email ID: pandramiseushasree@gmail.com

Using specialized chewing gum as a way for diagnosing malaria in people, therefore eliminating the need for blood drawn tests. Malaria-detecting chewing gum could be a lifesaver in areas that cannot accommodate medical testing. Chomping on a stick of gum could cheaply diagnose malaria and other diseases in developing countries. Maliva is one of the best inventions in the works currently. It applies to helping a huge chunk of the world's population and it will be a step closer to figuring out how to beat the malaria disease from spreading so quickly. Using saliva, instead of painful needle sticks, will become more common in the next few years and for diseases other than malaria.

PCL 027

NEURAL STEM THERAPY FOR SPINALCORD INJURY

K. Mounika Reddy*

Bharat Institute of Technology, Ibrahimpatnam, Telangana – 501510.

Email ID: mounikareddy3614@gmail.com

Spinal cord injury (SCI) occurs when spinal cord gets damaged which consequently leads to loss of sensory and motor function. The axons are crushed, the myelin sheath is destroyed and the

exposed axons degenerate. The connection between neurons is disrupted and the flow of information in the spinal cord is blocked. Stem cells are undifferentiated biological cells that can differentiate into specialized cells and divide through mitosis to produce more stem cells. A type of support cell of the nervous system from human embryonic stem cells, called oligodendrocytes make the insulation sheath of neurons without which signals would not be conveyed along the spinal cord. The oligodendrocytes wrap themselves around the axon forming a sheath of myelin. Neural stem cells are multipotent to generate neurons, oligodendrocytes, and astrocytes which can be propagated invitro. These oligodendrocytes are injected instead of embryonic stem cells to reduce risk of tumor formation in patients. The main goal of stem cell therapy is to regenerate and replace the neurons and glial cells that die immediately after injury. Although stem cell strategies are not clinically proved, it is most effective and efficient way to improve motor functioning.

Key words: Spinal cord injury, Oligodendrocytes, Stem cells, Multipotent cells and Myelin sheath.

PCL 028

ZIKA VIRUS

Alekhya. B*

G. Pulla Reddy College of Pharmacy, Hyderabad – 500 028.

Email ID: bhupathialekhya26@gmail.

The ZIKA virus, an alarming and disturbing infection that may be linked to thousands of babies born with under developed brains, is spreading through America. Zika virus was first isolated in 1947 from the blood of a sentinel rhesus monkey stationed in the Zika forest of Uganda, and in the following year it was again recovered from wild *Aedes africanus* captured in the same region. Surveys conducted in Uganda demonstrated that 6 per cent. Of 99 human sera contained neutralizing antibodies to this virus, suggesting that human infections were not uncommon. Two patients, however, in both of whom a significant rise in serum antibody to Zika virus was demonstrated, showed transient jaundice. Mouse protection tests carried out on sera from the local population likewise suggested a relationship between the incidence of jaundice and Zika virus infection. The present work was undertaken to explore more fully the results of Zika virus infection in a human volunteer with particular reference to the clinical manifestations and the development of hepatitis. The dengue like zika virus has been linked for the first time to cases of babies being born with small heads, microcephaly, Brazil's government said.

Key words: Zika virus, *Aedes africanus*, under developed brains of babies

PCL 029

BLUE BRAIN

K. Priyanka*

G. Pulla Reddy College of Pharmacy, Hyderabad, Telangana – 500 028.

Email ID: priyankakusumuru6@gmail.com

Blue brain is an artificial brain, which does not actually the natural brain, but can act as the brain. It can think like brain, take decisions based on the past experience, and response as the natural brain can. The main aim is to upload brain into machine. So that man can think, take decision without any effort. It is possible by using a super computer, with a huge amount of storage capacity, processing

power and an interface between the human brain and this artificial one. Through this interface the data stored in the natural brain can be up loaded into the computer. So the brain and the knowledge, intelligence of anyone can be kept and used for ever, even after the death of the person (EPFL). Brain and Mind Institute will begin simulating the brain's biological systems and output the data as a working 3-dimensional model that will recreate the high-speed electro-chemical interactions that take place within the brain's interior. These include cognitive functions such as language, learning, perception and memory in addition to brain malfunction such as psychiatric disorders like depression and autism. From there, the modeling will expand to other regions of the brain and, if successful, shed light on the relationships between genetic, molecular and cognitive functions of the brain.

PCL 030

BINGE EATING DISORDER (DES)

K. Naresh Kumar*, H.G. Raghavendra

CES College of Pharmacy, Kurnool

Email ID: nareshkumarnane6@gmail.com

Binge eating disorder is characterized by compulsive overeating in which people consume huge amounts of food while feeling out of control and powerless to stop. The symptoms of binge eating disorder usually begin in late adolescence or early adulthood, often after a major diet. People with binge eating disorder are embarrassed and ashamed of their eating habits, so they often try to hide their symptoms and eat in secret. Many binge eaters are overweight or obese, but some are of normal weight. Binge eating leads to a wide variety of physical, emotional, and social problems. People with binge eating disorder report more health issues, stress, insomnia, and suicidal thoughts than people without an eating disorder. Depression, anxiety, and substance abuse are common side effects as well. But the most prominent effect of binge eating disorder is weight gain. Biological abnormalities can contribute to binge eating. For example, the hypothalamus (the part of the brain that controls appetite) may not be sending correct messages about hunger and fullness. Researchers have also found a genetic mutation that appears to cause food addiction. Finally, there is evidence that low levels of the brain chemical serotonin play a role in compulsive eating. An effective treatment program for binge eating disorder should address more than just your symptoms and destructive eating habits. It should also address the root causes of the problem the emotional triggers that lead to binge eating and your difficulty coping with stress, anxiety, fear, sadness, and other uncomfortable emotions.

PCL 031

POLYCYSTIC OVARY SYNDROME (PCOD)

K. Tejaswi*, Annela Prathusha, V. Jyothi.

Teegala Krishna Reddy College of Pharmacy, Meerpet

Email ID: jyothi.vadhtya@gmail.com

In general, PCOS involves irregular ovulation in combination with excess androgens (i.e. male hormones) and possibly polycystic ovaries. Regardless of what the actual levels of male hormones in the blood are, most of these patients have clinical evidence of hyperandrogenism (excess male hormone effect), including hirsutism (excess male-like hair growth), or acne, or androgenic alopecia (scalp hair

thinning or loss). The polycystic ovary syndrome (PCOS) is one of the most common causes of infertility due to an ovulation in women. The clinical features of PCOS are heterogeneous and may change throughout the lifespan, starting from adolescence to postmenopausal age. This is largely dependent on the influence of obesity and metabolic alterations, including an insulin-resistant state and the metabolic syndrome, which affect most women with PCOS. Obesity does in fact have profound effects both the pathophysiology and the clinical manifestation of PCOS, by different mechanisms leading to androgen excess and increased free androgen availability and to alterations of granulosa cell function and follicle development.

Key words: Polycystic ovary syndrome, Androgens, Hirsutism.

PCL 032

A REVIEW ON NEURO DEGENERATIVE DISORDERS

P. Anjali Devi*, S. G. Ramya, T. Spurthi Reddy

CES College of Pharmacy, Chinnatekur, Kurnool

Email ID: anjalimenon785@gmail.com

Many neurodegenerative disorders with onset in mid to late adult life present diagnostic challenges to clinicians and pathologists alike. A distinguishing neuropathological feature has traditionally been the presence or absence of neurofibrillary tangles. Recent biochemical and molecular biological studies have identified the microtubule-binding protein tau as the predominant component of these and related inclusions, and have provided powerful new reagents for the study of neurodegenerative diseases. Several diseases previously considered distinct pathophysiological entities contain similar tau-immunoreactive lesions, but qualitative and regional anatomical differences in vulnerability can differentiate the disorders. Comparison of tau-immunoreactive lesions in three relatively uncommon neurodegenerative diseases progressive supranuclear palsy, Pick's disease, and corticobasal degeneration illustrates the types of analyses that demonstrate unexpected pathological similarities, but also fundamental differences between these disorders. These results have important implications for the differential diagnosis of disorders containing tau-immunoreactive lesions, including Alzheimer's disease.

PCL 033

MICROBIAL FUEL CELLS

S Vinay*, N Sirisha, R Pavan, G Nikitha.

Teegala Krishna Reddy College of Pharmacy, Meerpet.

Email ID: vinaysaka9797@gmail.com

Microbial fuel cells (MFC) are the devices that use bacterial metabolism to produce electrical current from various organic substrates. Thus, they transform chemical energy into electricity using oxidation-reduction reactions seen in bacterial metabolism. MFCs are of two types. Mediator microbial fuel cells and Mediator free microbial fuel cells. Various microbes such as *Clostridium butyricum*, *Acinobacillus succinogenes* and *Aeromonas hydrophila* are commonly used for these purposes. These MFCs are generally employed to measure water and electrical power generation.

Key words: Bacterial metabolism, Electrical energy, Fuel cells

PCL 034

CAMEL URINE IN TREATMENT OF CANCER

Habeeb Unnisa*, Nazila Mansoor, Dr. Avez Ali.

MESCO College of Pharmacy, Hyderabad, Telangana – 500006

Email ID: nazilamansoor7@gmail.com

Cancer is a disease characterized by uncontrolled cellular proliferation and differentiation. Managing human malignancies is still constitutes a major challenge with contemporary medicine. Although many anti neoplastic therapies have been developed, however, all these therapies are still far from ideal, with a mean increased exposure to toxic substances and harmful effects on different tissues. Natural products play an important role in our healthcare systems and act as a valuable source of potent compounds with wide variety of biological activities and novel chemical structure that may be important for novel drug development. In-vitro studies have shown camel urine to be effective against various cancer cell lines. These studies proved that camel urine has nanoparticles and bioactive ingredient (coded as PMF) that can fight cancer cells by inhibiting cell proliferation and triggered more than 80% of apoptosis in different cancer cells including breast carcinomas & medulloblastomas. Other in vitro studies have also been proved that camel urine has the ability to inhibit the induction of Cyp1a1 (cancer-activating enzyme) expression by TCDD (a potent CYP 1a1 inducer) and a known carcinogen. Clinical trials on patients indicated that the camel urine (syrup and capsules) did not entail any side effects. Hence it is concluded that camel urine shown to be effective in treating different cancers without any side effects and in a cost-effective way.

PCL 035

GAP JUNCTIONS: NEW PHARMACOLOGICAL TARGETS FOR TREATMENT OF ARRYTHMIAS, SEIZURE AND CANCER

Afreen Begum*, Quarratul Ain Quba, B. Veeresh

G. Pulla Reddy College Of Pharmacy, Hyderabad – 500 028

Email ID: afreen.taher@gmail.com

Intercellular communication in many organs is maintained via intercellular gap junction channels composed of connexins, a large protein family with a number of isoforms. This gap junction intercellular communication (GJIC) allows the propagation of action potentials (e.g., in brain, heart) and the transfer of small molecules which may regulate cell growth, differentiation and function. The latter has been shown to be involved in cancer growth: reduced GJIC often is associated with increased tumor growth or with de-differentiation processes. Disturbances of GJIC in the heart can cause arrhythmia, while in brain electrical activity during seizures seems to be propagated via gap junction channels. Many diseases or pathophysiological conditions seem to be associated with alterations of gap junction protein expression. Thus, depending on the target disease opening or closure of gap junctions may be of interest, or alteration of connexin expression. GJIC can be affected acutely by changing gap junction conductance or more chronic by altering connexin expression and membrane localization.

Key words: Gap junction; Connexin; Intercellular communication; Pharmacology; Toxicology; Cardiac; Cancer; Seizure

PCL 036

OVER VIEW OF EBOLA DISEASE

Afreen Sultana*, M. Shailaja

MLR Institute of Pharmacy, Dundigal, Hyderabad – 500043

Email ID: sanaafreen2098@gmail.com

Ebola, previously known as Ebola hemorrhagic fever, is a rare and deadly disease caused by infection with one of the Ebola virus strains. Ebola can cause disease in humans and nonhuman primates. It is firstly 1976 in Africa Ebola virus disease in humans caused by four of five viruses. Fatality rates are between 50% and 100%. The natural reservoir of the virus is unknown. As a result, little is understood about how Ebola virus is transmitted or how it replicates in its host. A variety of tests have proven to be specific and useful for Ebola virus identification. There is no FDA approved antiviral treatment for EHF. Incubation ranges from 2 to 21 days. Patients who are able to mount an immune response to the virus will begin to recover in 7 to 10 days and start a period of prolonged convalescence. Since there is no specific treatment outside of supportive management and palliative care, containment of this potentially lethal virus is paramount. In almost all outbreaks of EHF, the fatality rate among health care workers with documented infections was higher than that of no health care workers. Several promising vaccine candidates have been showed to protect nonhuman primates against lethal infections. Several types of vaccines are under development like cad3eboz, vsv-ebov. Different countries are affected with this disease, among these countries 11,315 deaths were reported from the year 2013-2015.

PCL 037

AUTISM SPECTRUM DISORDER

K. Amulya*, P. Sonali

Bharat School of Pharmacy, Ibrahimpatnam, Telangana – 501510

Email ID: amulyakeshan13@gmail.com

Autism spectrum disorder (ASD) is a neurodevelopment disorder characterized by impaired social interaction, verbal and nonverbal communication, restricted and repetitive behavior, and savant behavior. Autism spectrum disorder effects one in three million individuals in the US and tens of millions worldwide including racial, ethnic and socio economic groups. The disorder occurs four times more often in boys, usually the first born, than in girls. Evidently, the exact cause of autism spectrum disorder is currently unknown. It is a complex condition and may occur as a result of genetic predisposition, environmental and biological factors. The patients with ASD can be evaluated by personal observation by parents, genetic testing, hearing and lead exposure test using an autism specific screening tool such as M-CHAT and also screening for related medical issues such as sleep difficulties. The treatment approach can be; firstly specialized therapies which include speech, language therapy, occupational therapy, physical therapy, pharmacotherapy, sensory integration therapy etc. Secondly, teaching methods such as, Intensive Behavioral Intervention using Applied Behavioral Analysis, Treatment and Education of Autistic and related Communication Handicapped Children (TEACCH). These services are provided by Ministry of children and youth services. There is an unmet medical need

for effective treatment of ASD. Research advancements are being made effective by the use of various disease models and technologies to identify potential therapies.

Key words: Autism, Savant behavior, TEACCH, M-Chat, Genetic predisposition, Sensory integration therapy, disease models.

PCL 038

PHARMACOLOGICAL EFFECTS OF WATER MELON (*Citrullus lanatus*) ON WISTAR RATS

G. Chandrashekar*, A. Manikya Veena, Y.N.L. Nikhila, B. Meena Goud, CH. Srikala

School of Pharmacy, Anurag Group of Institutions

E mail ID: akupathnimanikyaveena@gmail.com

The use of herbal products is of global importance because of their low side effects, accessibility and affordability when compared with conventional medicine. *Citrullus lanatus* (water melon) is popular in indigenous system of folk medicine and it is known to contain bioactive compounds such as cucurbitacin, triterpenes, sterols and alkaloids, vitamins, minerals. Traditionally *Citrullus lanatus* had been reportedly used as purgative and emetic in high dose, vermifuge, demulcent, diuretic and tonic. The seed is used in the treatment of urinary tract infections, bed wetting, dropsy and renal stones, alcohol poisoning, hypertension, diabetic, diarrhoea and gonorrhoea. This review unveils the current experimental research on its biological activities which substantiate its ethno medicinal claims. Biological activities reviewed include; antimicrobial, antioxidant, antiplasmodial, anti-inflammatory, Antiprostatic Hyperplasia activity, anti-giardial activity, antioxidant, analgesic properties, its effects on the histology of the kidney of adult Wistar rats, antisecretory, antidiabetic, laxative, anti-ulcerogenesis and hepatoprotective activities. In view of its wide pharmacological and biological activities, its traditionally reported therapeutic potential such as, antihypertensive, anti-diarrhoeal, as well as its in-depth toxicity studies, among others, are yet to be experimented. These should be put into consideration in current researches.

Key words: *Citrullus lanatus*, traditional medicine, water melon, bioactivity

PCL 039

ZIKA VIRUS – A REVIEW

G. Raja Meenakshi*, A. Madhulika, Rangareddy

CES College of Pharmacy, Chinnatekur, Kurnool

Email ID: meenaksikishore42@gmail.com

Zika fever is an illness caused by the Zika virus, a member of the genus Flavivirus. 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 cases (60–80%) are asymptomatic. The main clinical symptoms in symptomatic patients are low-grade fever, conjunctivitis, transient arthritis/arthritis (mainly in the smaller joints of the hands and feet) and maculopapular rash that often starts on the face and then spreads throughout the body. In general the disease symptoms are mild and short-lasting (2–7 days). Health officials studying the 2015 Brazilian outbreak suspect that the disease may undergo

mother-to-child transmission in the womb and cause microcephaly, a birth defect. However, there are very few case reports in the literature.

Key words: Zika virus, Fever, flaviviruses, microcephaly.

PCL 040

MALARIA PROTEIN IN TREATMENT OF CANCER

Maseera Irum*

S. N. Vanitha College of Pharmacy, Hyderabad

Email ID: maseerairum2015@gmail.com

The hunt for a vaccine against malaria in pregnant women has provided an unexpected side benefit for Danish researchers, namely what appears to be effective weapon against cancer. It is revealed that the carbohydrate that the malaria parasite attaches itself to in the placenta in pregnant women is identical to a carbohydrate found in cancer cell. The combination of malaria protein and toxin seeks out cancer cells, the toxin released inside, and then the cancer cells die. In tumors placental like CSA chains are linked to a limited repertoire of cancer associated proteoglycans including CD44 and CSPG4. The drug inhibits the tumor cell growth and metastasis. The drug has been tested on mice that were implanted with three types of human tumors. General picture emerges to indicate that malaria protein is able to attack more than 90% of all types of tumors. This is an extraordinary finding that paves way for targeting sugar molecules in pediatric and adulthood human cancer. There is some irony that a disease as destructive as malaria might be exploited to treat another dreaded disease.

Key words: CSA chains, proteoglycans, metastasis.

PCL 041

ZIKA VIRUS

S. Sneha*, I. Malavika

Gurunanak Institutions Technical Campus, Ibrahimpatnam, R.R Dist., Telangana – 501506

Email ID: snehasarella08@gmail.com

Zika, spread through bites from infected mosquitoes, was named for the zika forest in Uganda, where the first case was isolated in a monkey in 1947. The common symptoms are fever, rash, joint pain, and conjunctivitis (red eyes). This is very dangerous because most people fully recover, but babies born to infected women can develop a birth defect that leaves the child with a smaller than normal brain and head. Outbreaks have occurred in Africa, South East Asia, the pacific islands, and several countries in the Caribbean and Latin and South America. No vaccine exists to prevent Zika virus disease. Prevent Zika by avoiding mosquito bites. Mosquitoes that spread Zika virus bite mostly during the day time. Mosquitoes that spread Zika virus also spread Dengue and Chikungunya viruses. These mosquitoes typically lay eggs in and near standing water in things like buckets, bowls, animal dishes, flower pots and vases. They are aggressive day time biters, prefer to bite people, and live indoors and outdoors near people. Mosquitoes become infected when they feed on a person already infected with the virus. Infected mosquitoes can then spread the virus to other people through bites. No vaccine or medications are available to prevent or treat Zika infections.

Key words: Zika virus, Female mosquitoes.

PCL 042

NANOSPONGES AND ITS RECENT ADVANCES

Jaya Pallapu*

Sarojini Naidu Vanita Pharmacy Mahavidhyalaya, Tarnaka, Hyderabad – 500017

Email ID: pjsweetblossom@gmail.com

Effective targeted drug delivery system has been a dream for long time. The invention of nanosponges has become a significant step towards overcoming these problems. Nanosponges are tiny sponges having size of about a virus and can be filled with variety of drugs. These sponges can circulate around the body until interact with specific target site and stick on surface and start releasing drug in a controlled manner which is more effective for a given dose. Important characteristic of these sponges is their solubility in aqueous form and give a effect to the drugs with poor solubility. Researches are going on nanosponge - hydrogel to treat skin infections caused by MRSA without using an antibiotic.

Key words: Nanosponges, nanosponge-hydrogel, MRSA.

PCL 043

ANGIOTENSIN CONVERTING ENZYME INHIBITOR INDUCED ANGIOEDEMA

G. Shruthi*, Dr. Bala Murali Mohan, Dr. K.S. Murali Krishna

Department of Pharmacy, MLRIP, Dundigal, Hyderabad-500043

Email ID: shruthigatla@gmail.com

This study aimed to determine the duration of use, presentation, and management of angiotensin converting enzyme (ACE) inhibitor-related angioedema patients at an urban academic medical center. Angiotensin-converting enzyme inhibitors (ACE-Is) are the primary medication class implicated in drug-associated angioedema. Angiotensin-converting enzyme (ACE) inhibitor-induced angioedema occurs in a minority of patients taking an ACE inhibitor. The clinical presentation encompasses acute abdominal symptoms, pronounced bowel edema and ascites with occasional facial and/or oropharyngeal swelling. It is diagnosed based on the temporal relationship between the symptomatic presentation and drug use, absence of alternative diagnoses including other causes of angioedema, and the prompt resolution of symptoms upon discontinuation of the ACE inhibitor. The majority of patients were treated with a corticosteroid and H₁ and H₂ receptor antagonists. Angioedema can occur at any time after starting ACE inhibitor use, with nearly half occurring after 1 year of use. Laryngeal involvement occurred in a minority of patients, but most of these patients were felt to require airway protection by intubation.

PCL 044

PROTECTIVE EFFECT OF NANOCERIA ON ISOPROTERENOL INDUCED CARDIOTOXICITY

Preeti Kumari*, Amit Khurana, Swarna Bale, P. Venkatesh, Chandraiah Godugu

National Institute of Pharmaceutical Education and Research (NIPER), Balanagar, Hyderabad

Email ID: chandragodugu@gmail.com, chandraiah@niperhyd.ac.in

Cardiotoxicity is one of the leading causes of death in the world and also one of the major concerns of safety in drug development. Isoproterenol, a sympathomimetic exhibiting non-selective β -agonist activity is a synthetic catecholamine that induces cardiotoxicity both by exogenous administration and endogenous excess release. In the present work we have dealt with this issue by using nanomedicine approach by exploring protective activity of Nanoceria. Male swiss mice were randomly divided into ten groups of seven mice per group (n=7) for 28 days. Group 1 served as normal control. Group 2 nanoceria control (2 mg/Kg); group 3 received ISO (20 mg/Kg/day) for 10 days. Group 4, 5 received ISO and nanoceria concurrently (i.p) (0.2, 2 mg/Kg respectively) whereas group 6 received 5 days pre-treatment with nanoceria before ISO exposure. Tissue homogenates were used for estimation of oxidative stress such as MDA and GSH levels. Hydroxyproline assay was done to determine the collagen content. Cardiac marker enzymes in serum such as CK-MB, LDH and ALT, AST, triglyceride and cholesterol were measured. Further ECG and histopathology was done to confirm the cardioprotective activity. Nanoceria significantly decreased the CK-MB, LDH levels along with triglyceride and cholesterol. Heart weight index was significantly improved with the treatment regimen. Cardiotoxicity was significantly alleviated as evident from CK-MB and LDH levels. Expression of proinflammatory cytokines reported the significant decrease in levels. ECG showed excellent improvement in rhythm of heart, indicating a potential cardioprotective effect. Further, protective activity of nanoceria was confirmed by histological staining with H & E stain and picosirius red staining that showed remarkable cardioprotection. In the present study we found significant improvement in cardiac failure by nanoceria. Nanoceria ameliorates the myocardial injury and heart impairment induced by isoproterenol. We are very much confident that in future nanoceria has great potential to become an alternative nanotherapy for dealing with ischemic heart failure.

PCL 045

SURROGACY- A REVIEW

D.Vineetha*, P. Madhuri, H.G. Raghavendra.

Dept. of Pharmacology, CES College of Pharmacy, Chinnatekur, Kurnool

Email ID: reddyvineetha547@gmail.com

Surrogacy is an "arrangement in which a woman agrees to a pregnancy, achieved through assisted reproductive technology, in which neither of the gametes belong to her or her husband, with the intention of carrying it to term and handing over the child to the person or persons for whom she is acting as surrogate; and a „surrogate mother" is a woman who agrees to have an embryo generated from the sperm of a man who is not her husband, and the oocyte for another woman implanted in her to carry the pregnancy to full term and deliver the child to its biological parents(s).

Key words: Assisted reproductive technology, Generated embryo, surrogate mother.

PCL 046

ZIKA VIRUS (ZIKV)

ErukullaSaikiran*

Vikas College of Pharmaceutical Science, Suryapet, Nalgonda (Dist), Telangana

Email ID: bazaz.98@gmail.com

Zika virus is a flavivirus related to yellow fever, dengue, west Nile and Japanese encephalitis virus. In 2007 ZIKV caused an outbreak of relatively mild characterized by rash, arthralgia and conjunctivitis on Yap Island in the southwestern Pacific Ocean. This was the first time that ZIKV was detected outside of Africa and Asia. Sixty years earlier, on April, 1947, fever developed in a rhesus monkey that had been placed in a cage on a tree platform in a forest of Uganda. Later it is named as Zika virus, was isolated from the mouse brain. In early 1948, ZIKV was also isolated from *Aedes africanus* mosquitoes trapped in the same forest. It is a single strand RNA virus containing 10,794 nucleotides encoding 3,419 amino acids. It is closely related to Spondweni virus. In the Americas, Zika virus is primarily transmitted by *Aedes aegypti*, but *Aedes albopictus* mosquitoes can also transmit the virus. In humans, it is primarily transmitted through the bite of an infected Aedes species mosquito. Aedes mosquitoes are aggressive daytime biters and feed both indoors and outdoors. Symptoms, it began with mild headache, next day, maculopapular rash covered his face, neck, trunk and upper arms, and spread to his palms and soles. Transient fever, malaise and back pain developed. No cure for these diseases, supportive therapy is given. Diagnosis for ZIKV infection includes PCR tests on acute-phase serum sample, which RNA and ELISA.

Key words: Flavivirus, arthralgia, *Aedes africanus*, maculopapular.

PCL 047

ANTISENSE THERAPY

Murakonda Vijetha*

Vikas College of Pharmaceutical Science, Suryapet, Nalgonda (Dist), Telangana

Email ID: vijetha1595@gmail.com

Antisense therapy has emerged as an exciting and promising strategy for the treatment of various diseases. Antisense drugs are different from conventional drugs that are designed to interact with protein molecules. Antisense drugs have more selective action and they have the potential to be more effective and less toxic than conventional drugs. Antisense oligonucleotides are usually highly selective and thus produce fewer adverse effects than conventional therapeutics. Recent clinical trials confirm the ability of antisense oligonucleotides to bind to RNA. This technology may be used to treat various conditions including cancer, diabetes and hypertension as well as autoimmune and cardiovascular diseases. The current status and future direction of several antisense drugs have potential clinical use in the treatment of various diseases.

Key words: Antisense, oligonucleotide, autoimmune diseases.

PCL 048

MIDDLE EAST RESPIRATORY SYNDROME

Salla Keerthi*, M. Manisha Reddy

Gurunanak Institutions of Technical Campus School of Pharmacy, Ibrahimpatnam, RR Dist.

Email ID: Skeerthi231@gmail.com, Manishamanchireddy235@gmail.com

After Swine flu and Ebola, the Middle East Respiratory Syndrome Corona Virus (MERS-CoV) is the new global threat that has put many Asian countries, including India, on high alert. In May 2014, CDC confirmed two unlinked imported cases of MERS in the United States – one to Indiana, the other to Florida. Middle East respiratory syndrome (MERS), also known as camel flu it is a viral respiratory infection caused by the MERS-coronavirus (MERS-CoV), a species with single-stranded RNA belonging to the genus betacoronavirus which has been found in some camels. People with MERS disease have been reported to have low white blood cell count. Symptoms may include fever, cough, diarrhea, and shortness of breath and incubation period for MERS is usually about 5 or 6 days, but can range from 2-14 days. MERS can affect anyone. MERS patients have ranged in age from younger than 1 to 99 years old. As of 2015 there is no specific vaccine or treatment for the disease. However, a number of antiviral medications are currently being studied. The World Health Organization recommends that those who come in contact with camels should wash their hands frequently and do not touch sick camels. They also recommend that camel products be appropriately cooked. Individuals with MERS can seek medical care to help relieve symptoms. For severe cases, current treatment includes care to support vital organ functions.

Key words: Middle East respiratory syndrome, betacoronavirus, low white blood cell count, no vaccine available, treatment includes care to support vital organ functions.

PCL 049

ZIKA VIRUS: AN EMERGING DISEASE IN AFRICA AND ASIA CONTINENTS

Prathibha Ramiseti*, Sahitya Dasari, Gayathri Goud, Aswini Satha, Hima Bindu

School of Pharmacy, Anurag Group of Institutions, Hyderabad, Telangana – 501301

Email ID: ramisetiprathibha@gmail.com

Zika virus (ZIKV) is a member of the *Flavi viridae* virus family which belongs to the genus *Flavivirus*. It is transmitted by daytime-active *Aedes* mosquito (*Aedes aegypti*). In humans, the virus causes an illness known as Zika fever. It is known since 1950 and found spread in Africa and Asian continents. The Pan American Health Organization (PAHO) said there is no evidence that Zika can cause death but some cases have been reported with serious complications in patients with pre-existing medical conditions. The virus has been linked to microcephaly, a condition in newborns marked by abnormally small heads and brains that have not developed properly. It also has been associated with Guillain-Barre syndrome, a rare disorder in which the body's immune system attacks part of the nervous system. Health officials have yet to establish a direct causal relationship between Zika virus infection and birth defects, but it is strongly suspected. Brazil has reported 3,700 cases of suspected microcephaly that may be linked to Zika. It is unclear whether in pregnant women the virus crosses the placenta and causes microcephaly. Research in Brazil indicates the greatest microcephaly risk appears to be associated with infection during the first

trimester of pregnancy. People who get Zika virus disease typically have a mild fever, skin rash, conjunctivitis, muscle and joint pain and fatigue that can last for two to seven days. Zika virus will continue to spread and it will be difficult to determine how the virus will spread over time. There is no treatment or vaccine available for Zika infection.

PCL 050

DEMENTIA- ITS MANAGEMENT AND FUTURE PERSPECTIVES

Maryam Shaik*, Hafsa Sania,

Deccan School of Pharmacy, Hyderabad, Telangana

Email ID: shinningayeshal7@gmail.com

Dementia is a general term for a decline in mental ability severe enough to interfere with daily life. Memory loss is an example. Alzheimer's is the most common type of dementia. Treatment of dementia depends on its cause. The goal of treatment is to slow down the progression of dementia-related impairments and to control behavioural symptoms, which may be treated with a combination of psychotherapy, environmental modifications, and medication. In the case of most progressive dementias, including Alzheimer's disease, there is no cure and no treatment that slows or stops its progression. But there are drug treatments that may temporarily improve symptoms. However, improvement of cognitive and behavioural symptoms can be achieved through a combination of appropriate medications and other treatments, including psychotherapy. Ultimately, the path to effective new treatments for dementia is through increased research finding and increased participation in clinical studies. Other therapies may also help persons with dementia with activities of daily living. The more recent anti-dementia agents belong to the so-called acetylcholinesterase inhibitors. Acetylcholine is one of the chemical substances that allow brain cells to communicate with one another, the so-called neurotransmitters. Physical therapy may improve mobility by teaching patients to use canes or walkers properly and showing them how to get in and out of chairs or beds.

Key words: Alzheimer's disease, Psychotherapy, Anti dementia agents, Acetylcholine

PCL 051

BIO-RESORBABLE STENTS IN CAD: PACLITAXEL ELUTING OR SIROLIMUSELUTING STENTS IN DIABETIC PATIENTS

Tarannum*, Yusra Majed Khan

Deccan School of Pharmacy

Email ID: tarannum.tara@gmail.com

Coronary Stent Replacement is a new technique in which a balloon expandable, stainless steel and slotted tube. Drug-eluting stents are highly effective in reducing the rate of in stent restenosis. It is not known whether there are differences in the effectiveness of currently approved drug-eluting stents in the high risk subgroup of patients with diabetes mellitus. The purpose of this study is to compare safety and efficacy of Paclitaxel Eluting or Sirolimus Eluting Stents to Prevent Restenosis in Diabetic Patients. Randomized study 250 patients with diabetes and coronary artery disease equally divided: paclitaxel eluting stents, and 125 to receive sirolimus eluting stents respectively. The primary end point was in-segment late luminal loss. Secondary end points were angiographic restenosis (defined

as in-segment stenosis of at least 50 percent at follow-up angiography) and the need for revascularization of the target lesion during a nine-month follow-up period. The study was designed to show noninferiority of the paclitaxel stent as compared with the sirolimus stent, defined as a difference in the extent of in-segment late luminal loss of no more than 0.16 mm. The extent of in segment late luminal loss was 0.24 mm greater in the paclitaxel stent group than in the sirolimus stent group ($P=0.002$). In segment restenosis was identified on follow-up angiography in 16.5 percent of the patients in the paclitaxel stent group and 6.9 percent of the patients in the sirolimus-stent group ($P=0.03$). Target lesion revascularization was performed in 12.0 percent of the patients in the paclitaxel stent group and 6.4 percent of the patients in the sirolimus-stent group ($P=0.13$).

PCL 052

APOPTOSIS: SIGNIFICANCE AND MOLECULAR MECHANISMS

G. Anusha *, N. Sirisha

Teegala Krishna Reddy College Of Pharmacy, Meerpet.

Email ID: aanu1935@gmail.com

Apoptosis triggered by exogenous and endogenous stimuli such as ultraviolet radiation, oxidative stress, and genotoxic chemicals is a crucial phenomenon within biological systems. Malfunctioning of apoptotic pathway may cause human diseases like cancer, neurodegenerative and autoimmune disorders. Recently, potent apoptosis-inducing compounds associated with human health have been recorded that prevent tumor promotion, progression, and the occurrence of cellular inflammatory responses. Certain photosensitizing drugs are being employed in photodynamic therapy to induce apoptosis for the treatment of cancer and non-cancerous cells. This review emphasizes the molecular mechanisms of apoptosis, associated diseases and certain therapeutic agents implicated in the elimination of malignant cells.

Key words: Apoptosis, apoptosis inducing drugs.

PCL 053

FAT BURNING FOOD SUPPLEMENTS

R.S. Shivani*, Rajeswari CH

G. Pulla Reddy College of Pharmacy, Hyderabad, Telangana

Email ID: Shivaniraj50@gmail.com

Fat burning food supplements are described as nutrient supplements that actually increase fat metabolism or energy expenditure. Fat burners impair fat absorption, helps in increasing weight loss. These foods increase fat oxidation during exercise and cause long term adaptations that promotes fat metabolism. Often, these supplements contain a number of ingredients, each with its own proposed mechanism of action and is often claimed that the combination of these substances will have additive effects. There are many fat burning food supplements available. The most popular supplements are caffeine, green tea and carnitine. There is much evidence which prove the activity of fat burning foods. Green tea is the most beneficial fat burning beverage. The bioactive principles in the tea leaves get dissolved in the water. The bioactive principle include caffeine (24-40Mg), catechins, epigallocatechin (EGCG). Green tea can be taken as beverage and also green tea extract can be consumed. EGCG

increases the levels of norepinephrine. The increased levels of norepinephrine causes breakdown of the fat.

PCL 054

DENGUE – AN EMERGING THREAT

Romana Fatima*

Deccan School of Pharmacy, Hyderabad, Telangana– 500001

Email ID: romanafatima786@gmail.com

Dengue is most prevalent mosquito-borne viral disease which is currently a expanding global health problem and is endemic in more than 110 countries. It is also called break bone fever. Severe dengue infection can result in life threatening illness. Dengue mainly causes either dengue haemorrhagic fever or dengue shock syndrome. It is transmitted by several species of mosquito within genus *Aedes*, principally *Aedes aegypti*, which are widely distributed in subtropical and tropical areas of the world. Symptoms of Dengue include fever, headache, muscle, and joint pain and a characteristic skin rash that is similar to measles. There is no specific antiviral drug for dengue, treatment depends on symptoms. Although no licensed dengue vaccines is yet available, several vaccine candidates are under development, including live attenuated virus vaccines, live chimeric virus vaccines, inactivated virus vaccines, and live recombinant, DNA and subunit vaccines. The live attenuated virus vaccines and live chimeric virus vaccines are undergoing clinical evaluation. Recent advancement in the management of dengue fever has been discussed.

Key words: Dengue, *Aedes*, symptoms, vaccines.

PCL 055

BRAIN DEAD DISORDERS

Madhuri Reddy*, Vineetha Reddy

Creative Educational Society College of Pharmacy, Chinnatekur, Kurnool.

Email ID: anirudhsrivatsavias@gmail.com

Brain death is the complete and irreversible loss of brain function .Brain death is one of the two ways of determination of death, according to uniform determination of death act of the United States It differs from persistence death in which some .The Australia and New Zealand Intensive Care Society (ANZICS) states that the "determination of brain death requires that there is unresponsive coma, the absence of brain-stem reflexes and the absence of respiratory centre function, in the clinical clinical or neuro-imaging evidence of acute brain pathology consistent with the irreversible loss of neurological function."Brain death is used as an indicator of legal death in many jurisdictions, but it is defined inconsistently. Various parts of the brain may keep living when others die, and the term "brain death" has been used to refer to various combinations. For example, although a major medical dictionary says that "brain death" is synonymous with "cerebral death" , the US National Library of medical subject headings system defines brain death as including the brainstem .Patients classified as brain-dead can have their organs surgically removed for organ donation though not everyone agrees with this practice, preferring to limit organ donation to those individuals who have suffered the death of all of their brain

and the death of their cardiac and respiratory systems (biological, or full, death). However, if one limits the criteria to those individuals, procuring viable organs can become much more difficult.

PCL 056

BIPOLAR DISORDER- MANIC DEPRESSION

Sudharani Dereddy*, Vasantha Jogineni

Creative Educational Society College of Pharmacy, Chinnatekur, Kurnool.

Email ID: srivatsavanirudh108@gmail.com

Bipolar disorder, also known as bipolar affective disorder or manic depression, is a mental disorder characterized by periods of elevated mood and periods of depression. The elevated mood is significant and is known as mania or hypomania depending on the severity or whether there is psychosis. During mania an individual feels or acts abnormally happy, energetic, or irritable. They often make poorly thought out decisions with little regard to the consequences. The need for sleep is usually reduced. During periods of depression there may be crying, poor eye contact with others, and a negative outlook on life. The risk of suicide among those with the disorder is high at greater than 6% over 20 years, while self harm occurs in 30–40%. Other mental health issues such as anxiety disorder and substance use disorder are associated. The cause is not clearly understood, but both genetic and environmental factors play a role. It is divided into bipolar I disorder if there is at least one manic episode and bipolar II disorder if there are at least one hypomanic episode and one major depressive episode. In those with less severe symptoms of a prolonged duration the condition cyclothymic disorder may be present. Other conditions that may present in a similar manner include substance use disorder, personality disorders and schizophrenia as well as a number of medical conditions. Blood tests or medical imaging can be done to rule out other problems, although medical testing is not required for a diagnosis. Treatment commonly includes psychotherapy and medications such as mood stabilizers or antipsychotics.

PCL 057

ZIKA VIRUS: AN EMERGING INFECTIOUS DISEASE

Khatija Mohammed Bhameshan*, Mohd Abu Talha, Syed Vakeeluddin, S.H. Rizwan.

Deccan School of Pharmacy, Aghapura, Hyderabad – 500028

Email ID: dazzlingaurora53@gmail.com

Zika virus (zika) is a member of the flaviviridae virus family and the flavivirus genus, transmitted by aedes mosquitoes. The virus was first isolated in 1947 from a rhesus monkey in the Zika forest of Uganda, Africa, and was isolated for the first time from humans in 1968 in Nigeria. In humans, it causes a mild illness known as "Zika". "Zika disease" or Zika fever, was confined to Africa and Asia from the 1950's until 2007, before 2007, viral circulation and a few outbreaks were documented in tropical Africa and in some areas in Southeast Asia. Since 2007, several islands of the Pacific region have experienced outbreaks. In 2015, Zika disease outbreaks were reported in South America for the first time and the cases of Zika have also been reported in returning travellers. Common symptoms include headache, mild fever, chills, conjunctivitis (red eyes), joint and muscle aches and rash. Other non-specific symptoms may include headache, fatigue, malaise, abdominal pain

and vomiting, there has also been an increased rate of microcephaly in newborn babies observed in Brazil in 2015, there are no vaccines or medications available to prevent or treat Zika infections. Therefore, treatment for everyone, including pregnant women, is directed at alleviating symptoms. Therefore, Zikv disease is now considered as an emerging infectious disease.

Key words: zika (zikv), flaviviridae, flavi virus, aedes mosquito, rhesus monkey.

PCL 058

DNA “CLOCK”

Pravallika Damacharla*, Rajeswari.CH.

G. Pulla Reddy College of Pharmacy, Hyderabad.

Email ID: narendra.damacharla@gmail.com

An international team of scientists has found a way to predict how much time you have left by comparing our actual age to biological age, a number worked out by measuring chemical changes to our DNA. The difference between these two numbers can be used as a DNA “clock” to estimate our life span. But if our biological age is higher than our real life age we are more likely to die sooner than someone who’s biological and real age match up- regardless of our sex, whether we smoke or have cardiovascular disease. In fact the link between a fast running biological clock and early death was clear across four independent studies, which involved almost 5,000 people aged over 50 for up to 14 years. In the research a person biological age was determined by the amount of chemical modification, known as methylation that had occurred in the DNA – something that can be measured by biomarkers in the blood. Unlike a mutation methylation does not actually change the sequence of DNA. But it does impact which genes turn on and are off and place an important role in many biological processes. Researches already knew that assessing methylation could be used to estimate to someone’s age. But this is the first time this factor has been shown to be strongly linked to life span. This new research increases our understanding of longevity and healthy aging.

PCL 059

THE ZIKA VIRUS

B. Vineeth*, M. Sai Srikar, V. Jyothi.

Teegala Krishna Reddy College of Pharmacy, Meerpet

Email ID: jyothi.vadhtya@gmail.com

Zika virus (ZIKV) is a mosquito borne arbovirus in the family *Flavi viridae*, genus *Flav ivirus*. It was first isolated in 1947 from a rhesus monkey in the Zika forest of Uganda. Sporadic human cases were reported from the 1960s in Asia and Africa. The first reported large outbreak occurred in 2007 on Yap Island, Federated States of Micronesia. The largest known ZIKV outbreak reported started in October 2013 in French Polynesia, South Pacific, a territory of France comprising 67 inhabited islands; an estimated 28,000 persons (11% of the population) sought medical care for the illness. The most common symptoms of Zika fever are rash, fever, arthralgia, and conjunctivitis. Most of the patients had mild disease, but severe neurologic complications have been described in other patients in French Polynesia.

Key words: Zika virus, Flaviviridae, Arthralgia.

PCL 060

THE ARTIFICIAL BLOOD

Ghazala Jabeen*, V. Jyothi

Teegala Krishna Reddy College of Pharmacy, Meerpet

Email ID: jyothi.vadhitya@gmail.com

Artificial blood is a product made to act as a substitute for red blood cells. While true blood serves many different functions, artificial blood is designed for the sole purpose of transporting oxygen and carbon dioxide throughout the body. Depending on the type of artificial blood, it can be produced in different ways using synthetic production, chemical isolation, or recombinant biochemical technology. Development of the first blood substitutes dates back to the early 1600s, and the search for the ideal blood substitute continues. Various manufacturers have products in clinical trials; however, no truly safe and effective artificial blood product is currently marketed. It is anticipated that when an artificial blood product is available, it will have annual sales of over \$7.6 billion in the United States alone.

Key words: Blood, artificial blood, Perfluorocarbons.

PCL 061

STEM CELLS

Y Hayagreeva Dinakar*

CES College of Pharmacy, Kurnool

Email ID: y.sairavali@gmail.com

Mammalian cell totipotency is a subject that has fascinated scientists for generations. A long lasting question whether some of the somatic cells retains totipotency was answered by the cloning of Dolly at the end of the 20th century. The dawn of the 21st has brought forward great expectations in harnessing the power of totipotency in medicine. Through stem cell biology, it is possible to generate any parts of the human body by stem cell engineering. Considerable resources will be devoted to harness the untapped potentials of stem cells in the foreseeable future which may transform medicine as we know today. At the molecular level, totipotency has been linked to a singular transcription factor and its expression appears to define whether a cell should be totipotent. Named Oct4, it can activate or repress the expression of various genes. Curiously, very little is known about Oct4 beyond its ability to regulate gene expression. The mechanism by which Oct4 specifies totipotency remains entirely unresolved. In this review, we summarize the structure and function of Oct4 and address issues related to Oct4 function in maintaining totipotency or pluripotency of embryonic stem cells.

PCL 062

EPIBONE: GROWTH OF BONES FROM OUR OWN STEM CELLS

K. Aashritha*

G. Pulla Reddy College of Pharmacy, Hyderabad, Telangana

E mail ID: aashrithakamtam@gmail.com

EpiBone is a biomedical engineering company that is currently in the process of reconstructing human bone growth for use in surgical operations. EpiBone will allow patients to grow bones with the use of their own stem cells in order to create a patient-specific product. These specialized bone grafts can simplify surgery, provide exact repair, and shorten recovery times. EpiBone has animal-tested its product and is currently waiting for FDA approval to begin testing with humans. EpiBone can improve existing factors of surgery, including recovery times, foreign body implantation, regeneration, and bone repair accuracy.

PCL 063

DENG VAXIA- NEW DENGUE VACCINE

Akhil. C*, R. Padmavathi

G. Pulla Reddy College of Pharmacy, Hyderabad, Telangana – 500028

Email ID: akhilchilukeshwaram@gmail.com

America and Asia the first vaccine approved to prevent dengue fever is a major innovation and a public health breakthrough. Dengvaxia will be a critical addition to the integrated dengue prevention and control efforts. It will be an essential tool to boost on-going community efforts to relieve the long-standing suffering that Dengue is a growing health threat in Mexico and many other tropical and subtropical countries in Latin America. This disease continues to bring to people in endemic countries like ours," asserts José Luis Arredondo García, Associate Director of Clinical Research in the National Institute of Pediatrics. Regulatory review processes for Dengvaxia are continuing in other endemic countries. Manufacturing of Dengvaxia has already started at vaccine facilities in France and first doses are already produced. Sanofi Pasteur remains committed to introducing Dengvaxia first in countries where dengue is a major public health priority. The World Health Organization (WHO) has called for development of a dengue vaccine as an essential part of the integrated dengue prevention effort needed to significantly lower the dengue burden globally. The WHO has called on endemic countries to reduce dengue mortality by 50% and morbidity by 25% by 2020. Disease impact modelling results indicate if you vaccinate 20% of the population in the 10 endemic countries that participated in the Phase III efficacy studies for Dengvaxia, in the ages 9 and above indication, you could potentially reduce your dengue burden by 50% in five years. Such a significant disease reduction in this large at-risk population would result in a smaller pool of infected individuals in a given country and, therefore, fewer mosquitoes capable of transmitting the disease, potentially leading to an overall lowering of transmission risk for all.

PCL 064

SYSTEMIC LUPUS ERYTHEMATOSUS

M. Ravali*, R. Padmavathi

G. Pulla Reddy College of Pharmacy

Email ID: ravali.surya@gmail.com

Systemic lupus erythematosus (SLE) is a clinically heterogeneous disease, which is autoimmune in origin and is characterized by the presence of autoantibodies directed against nuclear antigens. It is a multi-system disease, and patients can present in vastly different ways. Prevalence varies with ethnicity, but is estimated to be about 1 per 1000 overall with a female to male ratio of 10:1. The most common manifestations include rash, arthritis and fatigue. At the more severe end of the spectrum, SLE can cause nephritis, neurological problems, anaemia and thrombocytopaenia. Over 90% of patients with SLE have positive anti-nuclear antibodies (ANA). Hydroxychloroquine and non-steroidal anti-inflammatory drugs are used for milder disease; corticosteroids and immunosuppressive therapies are generally reserved for major organ involvement

PCL 065

ANTIOXIDANTS: AID IN TREATING CANCER

Sayed Irfan*, Preethi

Sultan-Ul-Ullom College of Pharmacy

Email ID: sayedirfan05@gmail.com

Antioxidants are chemicals that interact with and neutralize free radicals, preventing them from causing damage. Antioxidants are also known as free radical scavengers. The body makes some of antioxidants it uses to neutralize free radicals. These antioxidants are called endogenous antioxidants. External sources to obtain the rest of the antioxidants it needs called as dietary antioxidants. Examples of dietary antioxidants include beta-carotene and vitamins A, C, and E. Free radicals are highly reactive chemicals that have the potential to harm cells. They are created when an atom or a molecule either gains or loses an electron. Free radicals are formed naturally in the body and play an important role in many normal cellular processes. At high concentrations, free radicals can be hazardous to body and damage all major components of cells, including DNA, proteins, and cell membranes. The damage to cells caused by free radicals may play a role in the development of cancer and other health conditions. There is evidence of a reduced coronary risk in populations with high blood levels of the antioxidant nutrients, vitamins C and E. Evidence is also that diabetes, and microvascular complications associated with diabetes, involve oxidative stress and have compromised antioxidant status. In addition patients who develop acute respiratory distress syndrome (ARDS) also exhibit clear evidence of oxidative stress. Moderate consumption of antioxidant-containing foods such as vegetables and fruits may be beneficial in reducing cancer risk and in maintaining health.

PCL 066

ADVANCES IN UNDERSTANDING CAUSES OF AUTISM AND EFFECTIVE INTERVENTIONS

G. Shravani*, R. Padmavathi

G. Pulla Reddy College of Pharmacy, Hyderabad, Telangana – 500 028

Email ID: ganta.shravanirao@gmail.com

This prospective study examined object exploration behavior in 66 12-month-old infants, of whom nine were subsequently diagnosed with an autism spectrum disorder. Previous investigations differ on when the repetitive behaviors characteristic of autism are first present in early development. A task was developed that afforded specific opportunities for a range of repetitive uses of objects and was coded blind to outcome status. The autism/ASD outcome group displayed significantly more spinning, rotating, and unusual visual exploration of objects than two comparison groups. The average unusual visual exploration score of the autism/ASD group was over four standard deviations above the mean of the group with no concerns at outcome. Repetitive behaviors at 12 months were significantly related to cognitive and symptomatic status at 36 month outcome. These results suggest that repetitive or stereotyped behaviors may be present earlier than initially thought in very young children developing the autism phenotype

One Day National Seminar on
“INNOVATIONS IN PHARMACEUTICAL RESEARCH- 2016”
AND POSTER PRESENTATIONS- 06th February 2016

PHARMACEUTICAL ANALYSIS & QUALITY ASSURANCE



Organized By
G. PULLA REDDY COLLEGE OF PHARMACY

PAQ 001

A COMPARATIVE EVALUATION OF BRANDED AND GENERIC VERSIONS OF LEVOCETRIZINE AND CEPHALEXIN

Neha fathima*, Ayesha siddiqua.

Deccan School of Pharmacy, Hyderabad, Telangana – 500058.

Email ID: nehamirza329@gmail.com

In India most of its population spend huge amount of money on the branded medicines but most of the drugs are also available in the generic version which comply with Indian Pharmacopoeia standards. By prescribing these medicines doctors can reduce cost burden from the patient's pocket. Most of the drugs are also available at a lower price than the current marketed branded drugs. The main aim of this research work was to compare the generic versions of Cephalexin capsule 250 mg and Levocetirizine 5mg to their branded counterparts. It was concluded that the generics drugs met the Indian Pharmacopoeia standards and were of similar quality as that of branded drugs.

Key words: Generic drugs, Branded drugs, Levocetirizine tablets, Cephalexin capsule

PAQ 002

SPECTROPHOTOMETRIC METHOD DEVELOPMENT AND VALIDATION FOR THE ESTIMATION OF MESALAZINE IN PURE AND TABLET DOSAGE FORM BY UV- SPECTROPHOTOMETRIC METHOD

G. Balajikalpana*, B. Shahanaz Khatoon, R. Nageswara Rao

CES College of Pharmacy, Kurnool, AP.

Email ID: gaddalaykalpana@gmail.com

The objective of the present research work is to develop a simple, accurate, precise and sensitive spectroscopic method was developed for the estimation of Mesalazine in the pure and tablet dosage forms. A simple, rapid and accurate analytical method was developed for the estimation of Mesalazine in bulk and tablet dosage form by UV spectrophotometer and validated for the parameters like linearity, accuracy, system precision, intra-day precision, inter-day precision/ intermediate precision/ ruggedness, robustness, limit of detection (LOD) and limit of quantification (LOQ) as per ICH Guidelines. The melting point of Mesalazine (283° C) was recorded to check the identification of the drug. After considering the solubility, 6.8 phosphate buffers were selected as solvent. Mesalazine, 10 µg/ml solution was prepared and scanned in the UV region, from the spectra 330 nm was selected as an analyzing wavelength. Stability of the absorbance at λ_{max} 330 nm was also checked for up to 2 hours and 30 minutes. The optical characteristics such as absorption maxima (nm), beer's law limits (µg/ml) and correlation coefficient (r) was calculated for the method. The analysis of the tablet formulation by proposed method was in good agreement (401 ± 0.4956 mg/tablet) with label claim. The recovery studies were carried out at three different levels, i.e. 120%, 100% and 80%. The low value of % RSD is indicative of the accuracy of the proposed method. The result of recovery study revealed that the commonly encountered excipients and other additives usually present in the dosage form did not interfere with the proposed method. The precision of the proposed method was studied as an intra-day and inter-day analysis. The results obtained in recovery studies will indicate that there is no interference

from the excipients used in the formulation. The developed method was validated as per ICH guidelines and was found to be accurate and precise. Thus the proposed method can be successfully applied for the estimation of Mesalazine in pure and tablet dosage form.

PAQ 003

METHOD DEVELOPMENT AND VALIDATION OF CAPTOPRIL IN PURE AND SOLID DOSAGE FORM BY UV SPECTROPHOTOMETRY

Ghazala J Surdana*, R. Nageswara Rao

Creative Educational Society College of Pharmacy, Kurnool, AP – 518218.

Email ID: gsurdana@gmail.com

The objective of the present research work is to develop a simple, accurate, precise and sensitive spectroscopic method was developed for the estimation of Captopril in the pure and tablet dosage forms. A simple, rapid and accurate analytical method was developed for the estimation of Captopril in bulk and tablet dosage form by UV spectrophotometer and validated for the parameters like linearity, accuracy, system precision, intra-day precision, inter-day precision/ intermediate precision/ ruggedness, robustness, limit of detection (LOD) and limit of quantification (LOQ) as per ICH Guidelines. The melting point of Captopril (106°C) was recorded to check the identification of the drug. After considering the solubility, 1N sodium hydroxide (NaOH) was selected as solvent. Captopril, 10 µg/ml solution was prepared and scanned in the UV region, from the spectra 265 nm was selected as an analyzing wavelength. Stability of the absorbance at λ_{max} 265 nm was also checked for up to 2 hours and 30 minutes. The optical characteristics such as absorption maxima (nm), beer's law limits (µg/ml) and correlation coefficient (r) was calculated for the method. The analysis of the tablet formulation by proposed method was in good agreement (99.70 ± 0.0069 mg/tablet) with label claim. The recovery studies were carried out at three different levels, i.e. 120%, 100% and 80%. The low value of % RSD is indicative of the accuracy of the proposed method. The result of recovery study revealed that the commonly encountered excipients and other additives usually present in the dosage form did not interfere with the proposed method. The precision of the proposed method was studied as an intra-day and inter-day analysis. The results obtained in recovery studies, indicates that there is no interference from the excipients used in the formulation. The developed method was validated as per ICH guidelines and was found to be accurate and precise. Thus the proposed method can be successfully applied for the estimation of Captopril in pure and tablet dosage form.

Key words: Captopril, 1N sodium hydroxide, Capoten, UV spectrophotometry.

PAQ 004

ANALYTICAL METHOD DEVELOPMENT AND VALIDATION FOR THE ESTIMATION OF GUAIFENESIN BY RP-HPLC

Venkateshwari. T*, Pushpalatha. E

Dept. of Pharmaceutical Analysis, Creative Educational Society's College of Pharmacy, Kurnool,
Andhra Pradesh – 518218

Email ID: venkytupakula888@gmail.com

A simple, rapid, accurate, precise and reproducible RP-HPLC method was developed and validated for the estimation of Guaifenesin in tablet dosage form. The method was carried out using Enable C18 G 250 x 4.6mm, 5 μ column in a binary mode with mobile phase water adjusted to pH 3 with OPA and acetonitrile in the ratio of 73: 27% v/v. Flow rate was set at 1.3ml/min and detection was carried out at 240nm using a PDA detector. The retention time was found to be 5.281min and the method produced linear response in the concentration range of 2-20 μ g/ml (r^2 - 0.999). The recovery studies were also carried out and %RSD from reproducibility was found to be below 2%. LOD and LOQ for this method were found to be 0.104 μ g/ml and 0.318 μ g/ml respectively. The developed method was sample, sensitive and specific. Hence the method can be used for the estimation of Guaifenesin in tablet dosage form.

Key words: Guaifenesin, RP-HPLC, Validation

PAQ 005

METHOD VALIDATION OF ANALYTICAL PROCEDURES

Tahseen Banu*, Deeba Tabassum

Creative Educational Society College of Pharmacy, Kurnool, Andhara Pradesh - 518218.

Email ID: tahseenbanu011@gmail.com

After the development of an analytical procedure, it is most important to assure that the procedure will consistently produce the intended a precise result with high degree of accuracy. The method should give a specific result that may not be affected by external matters. This creates a requirement to validate the analytical procedures. The validation procedures consists of some characteristics parameters that makes the method acceptable with addition of statistical tools.

Key words: Validation, Analytical Procedure, Accuracy, Precision, Robustness

PAQ 006

ANALYTICAL TECHNIQUES IN NANOTECHNOLOGY

U. Ramya Krishna*, E. Pushpa Latha

Department of PA & QA, Creative Educational Society's College of Pharmacy,
Kurnool. Andhra Pradesh – 518218.

Email ID: u.ramyakrishna15@gmail.com

Nanotechnology is one of the most important emerging technologies worldwide. Through the controlled manufacture and structuring of materials, it allows the creation of completely new properties

in product development. Nanotechnology is the engineering of functional systems at the molecular scale. Now a day's growth in the micro and nano engineering industry has led to demand for analytical and characterization methods for these materials and system. Materials characterization at increasingly small dimensions is a critical part of many manufacturing industries, including semiconductors, optoelectronics, automotive and aerospace.

Some analytical methods in nanotechnology are,

1. TEM – Transmission Electron Microscopy
2. XPS-X-ray Photoelectron Spectroscopy
3. XRD- X-ray Diffraction
4. AES-Auger Electron Spectroscopy

PAQ 007

DEVELOPMENT&VALIDATION OF RP-HPLC METHOD FOR THE DETERMINATION OF RELATED SUBSTANCES OF CLOPIDOGREL BISULFATE IN TABLET DOSAGE FORM

Sindhuri. S*, Pushpa Latha.E

Department of PA & QA, CES College of Pharmacy, Kurnool, A.P.

Email ID: vidhyaswetham122@gmail.com

The determination of Related substances of Clopidogrel Bisulfate in tablet dosage form by RP-HPLC is developed using 0.2% ortho phosphoric acid with pH 2.50 and acetonitrile in the ratio of 900:100% v/v as mobile phase-A and mixture of acetonitrile and 0.2% ortho phosphoric acid in the ratio of 900:100% v/v was selected as a mobile phase-B which gives good resolution and good peak shapes for Clopidogrel Bisulfate and their related substances. The flow rate was set at 1.0 ml/min, and the column Zorbax SB C₈ column, 250 * 4.6 mm i.d, 5µm column was used for the separation with a run time of 50min and the temperature is maintained at 30⁰ C. The linearity concentrations are 50% -300% and the correlation coefficient of Clopidogrel Bisulfate and their related substances was found to be 0.999. The developed method was validated according to USP validation parameters like system suitability, specificity, accuracy, precision, linearity, robustness and ruggedness. The percentage of recovery of Clopidogrel Bisulfate was found to be 100.4% at 100% level and the related substances was found to be within acceptance range at 100% level. The low standard deviation values and good recoveries indicate the reproducibility and accuracy of the developed method.

Key words: Clopidogrel Bisulfate, Related substances, RP-HPLC, Validation.

PAQ 008

A REVIEW ON ULTRASONIC SPECTROSCOPY

K. Vijaya Lakshmi*, K. Hima Bindu, S. Bushra

Dept. of Pharmaceutics, CES College of Pharmacy, Kurnool, A.P

Email ID: binduvijju48@gmail.com

Ultrasonic spectroscopy and high resolution ultrasonic spectroscopy are the novel non-destructive approaches for the analysis of materials that uses the ability of ultrasound to probe systems non-invasively and report their constitution, microstructure and intermolecular interactions. It employs

high frequency acoustic waves to probe the intermolecular forces in materials. The particle size distribution and concentration of a colloidal dispersion can be determined by measuring its ultrasonic velocity and or attenuation co-efficient as a function of frequency and then using a suitable mathematical model to interpret the spectra. Ultrasonic spectrometer utilizes either continuous wave or pulse echo techniques. The ultrasonic technique could be used to monitor the efficiency of a processing operation in real time that could lead to a major improvement in the manufacture of many colloidal-based materials.

Key words: Ultrasonic velocity, Attenuation co-efficient, Interferometer, Piezotransducer, Colloidal systems

PAQ 009

STUDY OF STABILITY CONSTANT OF MIXED-LIGAND COMPLEX FORMATION OF COPPER (II) WITH SOME AMINO ACIDS AND RITONAVIR

K. Sukanya*, T. Rajkumar, L.MeenakshiYadav, L. Siva Sanker Reddy

Dept. of Pharmaceutical Chemistry, Creative Educational Society's College of Pharmacy,
Kurnool, Andhra Pradesh – 518218

Email ID: rajkuty1983@gmail.com, kuruvasukanya96666@gmail.com

Formation of binary and ternary complexes of Cu(II) metal with ritonavir as a primary ligand with some amino acids (DL-Alanine, Glycine) was studied by the potentiometric technique at $27 \pm 0.1^\circ\text{C}$ in 20% (v/v) ethanol-water medium and at 0.1M NaClO_4 ionic strength. Proton ligand stability constants were determined by using calvin Bjerrum titration technique.

Key words: Stability constant, $\Delta \log K$, Ritonavir, Mixed ligand complex.

One Day National Seminar on
“INNOVATIONS IN PHARMACEUTICAL RESEARCH- 2016”
AND POSTER PRESENTATIONS- 06th February 2016

PHARMACY PRACTICE



Organized By
G. PULLA REDDY COLLEGE OF PHARMACY

PPR 001

ECOPHARMACOVIGILANCE AND ITS IMPACT ON CLINICAL PRACTICE

R. Anusha Sri*, Dr. Deepika

Department of Clinical Pharmacy, MNR College of Pharmacy, Hyderabad.

Email ID:

Pharmacovigilance activities are done for monitoring, detection, assessment, understanding and prevention of any adverse reactions to drug at therapeutic concentration on animals and human beings. Growing research has given a birth to the science of Ecopharmacovigilance which aims to ensure that significant environmental issues associated with pharmaceuticals in the environment are identified in a timely way, and managed appropriately. The greatest challenge in EPV is of signal detection in environment and establishment of cause and effect. EPV has become a research topic in Europe and North America. A number of findings related to rising level of some drugs and their adverse effects have necessitated some action by regulatory agencies like FDA and European Union. Environmental Risk Assessment (ERA) is a regulatory requirement prior to new drug launch. But still there is no proper protocol for monitoring potential adverse effects on environment after the product is launched. There should be laws and regulations on EPV, rational medication, drug withdrawal programmes, policy guided and scientific researches on EPV by pharmaceutical firms and academia. The main focus of the studies on what EPV means in clinical practice and what practical measures can be taken to assess environmental risks across product life cycle, particularly after launch of new drug. As the global EPV should be a prospective measure, so in India we need to increase transparency and availability of environmental data for all the newly launched medicinal products.

PPR 002

ETIOLOGY AND HAZARDS OF OBESITY

Afzoon Butool*

Gurunanak School of Pharmacy, Hyderabad

Email ID: afzoonkhan839@gmail.com

Overweight and obesity are a result of energy imbalance over a long period of time. The cause of energy imbalance for each individual may be due to a combination of several factors. Individual behaviors, environmental factors, and genetics all contribute to the complexity of the obesity epidemic. Obesity is a exceedingly complex group of diseases and probably should be characterized as a syndrome. Nowadays many people don't follow dietary habits and eat a lot of junk foods filled with calories and fat for a long period of time, thus resulting in overweight and obesity, which leads to a complex number of diseases. The risk factors and the causes of obesity includes: Environmental factors, Genetic factors, Intra-uterine, Diet composition and eating patterns. Being seriously overweight can compromise your health and shorten your life. Overweight people particularly those who were overweight during their young /adult years die earlier than people of average weight. Obesity (being more than 20 percent of the ideal weight) is a risk factor for the leading 10 causes of death: Diabetes, Heart disease, Stroke, Cancer, Gall stones, Infertility, Joint problems, back pain, Hypertension, Hyperlipidemia.

PPR 003

BIOLOGICAL EFFECTS OF RADIATION

Pranitha Bhuma*

Gurunanak School of Pharmacy, Hyderabad

Email ID: pranithabhuma10@gmail.com

Radiation is one of the best-investigated hazardous agents. A single accidental exposure to a high dose of radiation during a short period of time is referred to as an acute exposure, and may produce biological effects within a short period after exposure. These effects include: Skin damage, Nausea and vomiting, Malaise and fatigue, increased temperature, Blood changes, Bone marrow damage etc. The delayed effects of radiation are due to both acute exposure and continuous exposure (chronic exposure). In this case, the negative effects may not be apparent for years. The most common delayed effects are various forms of cancer (leukaemia, bone cancer, thyroid cancer, lung cancer) and genetic defects (malformations in children born). In any radiological situation involving the induction of cancer, there is a certain time period between the exposure to radiation and the onset of disease. This is known as the "latency period" in which no symptoms of disease are present. The minimum latency period for leukaemia is 2 years and can be up to 10 years or more for other types of cancer. The foetus is more sensitive to the effects of radiation than the adult human. If an irradiation occurs in the first 30 weeks of pregnancy, delayed effects may appear in the child. These include mental retardation (period of approximately 4 years). Milli sieverts per hour (mSv) - this is a measure used more commonly by the International Commission on Radiological Protection. For example: A gastrointestinal series X-ray investigation exposes the human to 14 mSv. Radiation on human body causes mainly eye cataracts, skin cancer, lung cancer, breast cancer etc.

PPR 004

MAMMOGRAPHY

Syeda Sanobar Ghazaal*, Nuzhat Fatima

Deccan School of Pharmacy, Darussalam, Hyderabad

Email ID: syedasanobar26@gmail.com

Digital Breast Tomosynthesis (DBT), commonly called 3D Mammography, uses low energy x-rays to recreate 3D images of the breast which takes multiple images from many different angles. While conventional mammograms take pictures of the breast from 2 angles. It is the current "gold standard" for diagnosing breast disease but most cancers arise in dense ductal tissue so lesion identification in women with dense breasts and at increased risk for breast disease is particularly challenging. The resulting high quality images improve visualization of dense breasts which improves early identification of breast cancer and help to localize the cancers so they may be biopsied or treated more cost-effectively. This scanner design will provide consistent, high quality images of breast tissues especially in women with "dense breasts" or young women at increased risk who require more frequent imaging. The 3D procedure takes place during your breast compression for your screening mammogram and adds only a few seconds to the full exam. Digital Breast Tomosynthesis is an FDA approved 3D imaging modality that gives radiologists the ability to examine breast tissue in reconstructed 1 millimeter thin slices in addition to the traditional mammography views. The additional

views help to reduce confusion of overlapping tissue and hopefully reduce call backs. Yearly mammograms and breast awareness play a crucial role in early detection. It is a pleasure to offer 3D mammography to our community in our continuous efforts to improve early detection. The goal of this project is to improve early detection of breast cancer by building an ultrasound scanner that can image the entire breast thus standardizing ultrasound breast imaging to provide high quality images improving detection of non palpable breast cancers.

PPR 005

STUDY ON DRUG UTILIZATION EVALUATION OF NSAIDs IN A TERTIARY CARE TEACHING HOSPITAL

Harsh Patel*, Shiv Kumar, Pradeep Kumar Thakur, Binu K.M. and H. Doddayya
Department of Pharmacy Practice, N.E.T. Pharmacy College, Raichur, Karnataka, India
Email ID: harsh.patel7411@gmail.com

NSAIDs are playing vital role in the treatment of pain and inflammation and constitute the largest single group of drugs used worldwide. The present study was aimed to evaluate the utilization of NSAIDs in a Tertiary Care Teaching Hospital with secondary objectives of assess co-prescription with gastroprotective agents, the nature and severity of adverse drug reactions and drug-drug interactions, with an intention to prevent the inappropriate use of NSAIDs. A prospective study was carried out in 400 In-patients of various departments of the hospital during the 6 months period of Dec 2013 to May 2014. Out of 400 patients, 237 were male and 163 were females, in which most of the patients (63.5%) were belonging to age group of 21-50yrs. The major complaint of the patient was arthritic pain (25.5%). Most of the patients (77%) were prescribed single NSAIDs as monotherapy in different dosage forms, although some patients were prescribed with combination of Aceclofenac + Paracetamol (13.75%) and Diclofenac + Paracetamol (6.65%). The preferential COX-2 inhibitors were widely prescribed (84.5%) as compared to non-selective COX inhibitor (15.5%). Among various NSAIDs prescribed, Diclofenac (45.90%) and Aceclofenac (15.96%) were mostly prescribed. NSAIDs were mostly prescribed by parenteral route (36.31%) and also by oral route (35.12%). Most of the patients were co-prescribed NSAIDs with gastroprotective agents (80.5%) and antibiotics (64.25%). In the study, moderate drug interactions were found between NSAIDs and Antibiotics. No Adverse drug reactions were reported during the study.

Key words: Hospitalized Patients, Prescription, Drug-Drug Interactions

PR 006

ROLE OF ASPIRIN IN PREVENTION OF PREECLAMPSIA

SadiaFarooqui*, Md. Nematullah Khan
Deccan School of Pharmacy, Darussalam, Aghapura, Hyderabad
Email Id: sadianaseer15.sf@gmail.com

Pre-eclampsia, the obstetric disorder characterized by hypertension and proteinuria prevails all over the world and presents as a pressing peril for fetal and maternal lives. Though inflammation, increased levels of TXA₂, ischemic placenta, dysfunction of endothelium are discerned, the exact

pathophysiology yet remains a mystery. The absolute treatment is still to be discovered, however its prevention by low dose aspirin presents as a relieving factor for Pre-eclampsia. In this review, with the pathophysiology, diagnosis, risk factors, prevention and various trials done, low dose aspirin stands as the recommended choice. The various outcomes of research include controlled blood pressure, decreased proteinuria, pregnancy complications, miscarriages and growth restrictions in foetus.

Key words: Prevention, Pre-eclampsia, Aspirin

PPR 007

A PROSPECTIVE ASSESSMENT OF POLYPHARMACY INDUCED DRUG INTERACTIONS WITH CORTICOSTEROIDS AND THEIR SEVERITY

M. Shramik*, Pradeep Kumar Thakur, Shiv Kumar, Binu K. M. and H.Doddayya

Department of Pharmacy Practice, N.E.T. Pharmacy College, Raichur, Karnataka, India

Email ID: shramik.maddineni@gmail.com*

Drug interaction represents a major problem in day-to-day practice. The incidence of adverse reactions increases almost exponentially as the number of drugs co-prescribed rises, and this is in part due to interaction. Critically ill, chronically ill and elderly patients are particularly at risk of drug interactions due to polypharmacy as well as impaired homeostatic mechanisms. Hence the study was aimed to assess polypharmacy and drug interactions with corticosteroids in the prescriptions. A prospective observational study was carried out in 211 In-patients from various departments of the hospital during 6 months period. Out of 211 In-patients, 142 were male and 69 were female, in which most of the patients belongs to age group of 51-60 years. 158 (74.9%) patients belongs to major polypharmacy and drug interactions found in around 52% prescriptions. Out of which total 124 were moderate, 18 were major and 12 were contraindicated interactions. The interactions were also classified as excellent (35), good (75) and fair (40) based on documentation and rapid (37), delayed (74) and not specified (42) based on onset. 74 (35.5%) patients were having only one interaction in their prescription. Commonly antihypertensive, antibiotics, NSAIDS were found to interact with corticosteroids. Our study suggests that current practice in our hospital associated with greater polypharmacy and drug interactions. Hence close monitoring or observation or therapy modification is required to minimize the occurrence of drug related problems by health related professionals.

Key words: Drug-drug interaction, polypharmacy, corticosteroids

PPR 008

A NEW DAWN IN TREATMENT OF HYPERCHOLESTEROLEMIA

K. Tejasree*

Guru Nanak Institutions Technical Campus School of Pharmacy, Ibrahimpatnam, RR Dist.

Email ID: teju9.kalakata@gmail.com

Cholesterol, a soft, waxy substance present in the cells throughout the body, serves many important functions. However, elevated levels of certain forms of cholesterol are some of the primary drivers in the development of atherosclerosis and coronary heart disease. Statins have been the first-line drugs for lowering cholesterol since the late 1980s. But, statins seems to be ineffective in one out of

five subjects. Adding a second drug that lowers cholesterol by a different mechanism doesn't always help. Also, some people can't take a statin because of side effects like muscle pain, liver damage, or the development of diabetes. Every so often a medical advance comes along that rewrites the script for treating a disease or condition. The new drugs, called PCSK9 inhibitors, are monoclonal antibodies. These drugs target and inactivate a specific protein in the liver. Knocking out this protein, called proprotein convertase subtilisin kexin 9, dramatically reduces the amount of harmful LDL cholesterol circulating in the bloodstream. Lower LDL translates into healthier arteries and fewer heart attacks, strokes, and other related problems. PCSK9 inhibitors are still experimental drugs. Various trials conducted on these drugs showed effective results and suggested of a new horizon in treating hypercholesterolemia. It must be noted that combining a statin and a PCSK9 inhibitor may be a good option for people at especially high risk for cardiovascular disease.

PPR 009

STUDY OF UTILISATION OF ACID SUPPRESSANTS IN MODERN CLINICAL PRACTICE

P. Divya*, Krishna Kumar JHA, V. Swetha, Vishnuvardhan Reddy, Binu K.M and H. Doddayya
Department of Pharmacy Practice, N.E.T. Pharmacy College, Raichur, Karnataka – 584103
Email: divyareddie93@gmail.com

A prospective observational study was carried out in general medicine department of a tertiary care teaching hospital for a period of six months. The study aimed to identify and evaluate appropriateness of ASDs and also to gain a better understanding of attitudes towards PPIs and H₂ receptor blockers and usage patterns of these agents in individuals prescribed for acid related illness. 400 patients who were admitted in general medicine department prescribed with ASD's were included. In the study population male (55.75%) were found to be more than female (44.25%) patients. Most of the patients belong to age group of 51-60 years 28%, followed by 21% of 31-40 years. In 40% of the prescription ASDs were given by both oral & parenteral route, following 127(31.75%) for parenteral route alone and 113(28.25%) were given by oral route alone. The majority of patients were prescribed with H₂ receptor antagonist (49.25%), followed by PPIs alone (21.75%) as well as combination of both (20.25%). Ranitidine (54.75%) was the most prescribed drug followed by pantoprazole (21.25%) and combination of ranitidine and pantoprazole (18%). ASDs were prescribed in different dosage forms of which majority of the drugs were given by injections 210 (52.5%), followed by tablet and injections 54(13.5%). The study found irrational use of ASDs in study site. The study is to the establishment of proper guidelines to the prescribing of these acid suppressant agents at each hospital and to share the data with other hospitals and healthcare settings.

Key words: Acid suppressant drugs (ASDs), H₂RAs, Prescribing pattern, PPIs

PPR 010

NATURAL PRODUCTS USED TO CONTROL DIABETES MELLITUS

B. Manisha*, M. Keerthana, V. Jyothi

Teegala Krishna Reddy College of Pharmacy, Meerpet

Email ID: bhadrashattemanisha@gmail.com

To review the efficacy and safety of natural products commonly used for diabetes. Natural products have long been used in traditional systems of medicine for diabetes. Products in common use include nopal (prickly pear cactus), fenugreek, karela (bitter melon), gymnema, ginseng, tronadora, chromium, and alpha-lipoic acid. The popularity of these products varies among people of different ethnicities. Nopal is the most commonly used herbal hypoglycemic among persons of Mexican descent. Karela is more commonly used by persons from Asian countries. Some of these agents have gained universal appeal. For a select number of products, studies have revealed single or multiple mechanisms of action. For several of these, high soluble fiber content is a contributing factor. Based on the available evidence, several natural products in common use can lower blood glucose in patients with diabetes. Commonly used natural products often have a long history of traditional use, and pharmacists who have a stronger understanding of these products are better positioned to counsel patients on their appropriate use.

Key words: Diabetes mellitus, Natural products, gymnema.

PPR 011

OFLOXACIN INDUCED TEN - A CASE REPORT

Sandeep Ankam*, Pravallika Guttu

Department of Pharm. D, CMR College of Pharmacy, Hyderabad, Telangana

Email ID: ankamsandeep12@gmail.com

Cutaneous drug eruptions are one of the most frequent manifestations of adverse drug reactions, seen in 2-3% of hospitalised patients. Toxic epidermal necrolysis (TEN) is a potentially life-threatening dermatologic disorder characterized by widespread erythema, necrosis, and bullous detachment of the epidermis and mucous membranes, resulting in exfoliation and possible sepsis and/or death. The development of TEN in this patient has been initiated by the intake of oral ofloxacin, and the subsequent treatment with oral diclofenac may have increased his adverse reactions. Practitioners should be aware of this rare but potentially serious adverse event, especially ofloxacin is commonly used for Pneumonia, skin and soft tissue infections and genitourinary infections a close follow-up with patients to evaluate these adverse reactions, especially in case of quinolones.

Key words: Cutaneous drug eruptions, Toxic epidermal necrolysis (TEN), Ofloxacin.

PPR 012

COMPUTER NAVIGATED KNEE REPLACEMENT

Nuzhat Jabeen*, Mehjabeen

Deccan School of Pharmacy, Darussalam, Hyderabad.

Email ID: heena.angel03@gmail.com

A total knee replacement surgery is the last resort to relieve pain and restore function in knee damaged by arthritis or an injury when non-surgical treatments do not relieve the condition. The procedure involves replacing the damaged surfaces of the articulating bones with artificial implant. Most of these implants wear with use. Thus, risk of need for revision surgery is high in young and active people if the implant has to last the lifetime of the patient. The life of the implant can be extended by precise alignment of the implant and this can be achieved by the use of computer navigation for total knee replacement surgery. Computer navigation provides the surgeon with the real time 3D images of the mapped patient's knee and the surgical instruments during surgery. The data for the images is provided by the infrared sensors, which are fixed to the bones of the knee and the surgical instruments. Their position is tracked by an infrared camera, which is placed above the surgical table connected to the computer. The computer then generates the real time images with the help of the appropriate software to guide the surgeon to precisely resurface and cut the bones of the knee and fix the implant precisely & accurately according to the pre-operative surgical plan. Thus, the surgery is done by the surgeon only. Computer navigation is just a tool to guide the surgeon and improve the outcome of the surgery. It cannot replace the skills of an experienced surgeon.

PPR 013

CASUALTY ASSESSMENT OF ADVERSE DRUG REACTION IN PULMONOLOGY DEPARTMENT OF A TERTIARY CARE HOSPITAL

Maria Ansari*, Sumayya Samreen

Deccan School of Pharmacy, Hyderabad, Telangana, India -500 001

Email ID: ansarimariiii@gmail.com

Adverse drug reaction (ADR) is considered to be the sixth leading cause of death. The incidence rate estimates approximately 2% of hospital admissions are due to ADRs. Our objective was to monitor ADRs in Pulmonology department of a tertiary care hospital patient with pulmonary diseases in an inpatient department of pulmonology. A prospective, single centered, observational and open labeled study was carried out in Princess Esra Hospital. The patient population was broadly divided into four categories based on diagnosis chronic obstructive pulmonary disease, Infections, Asthma and Others. Suspected ADRs were reported, analyzed, and causality assessment was carried out using Naranjo's algorithm scale. A total of 302 patients were observed, of which 98 patients experienced ADRs, which accounted for 32.23% of the incidence and totally 160 ADEs were observed. Adult Patients were found to have higher incidence (32.09%) while the incidence rate was slightly greater in geriatric patients (32.39%). The highest incidence of ADEs were found in others group (78.57%). Majority of ADRs were suspected to be due to theophylline (19.39%). Gastrointestinal system (38.75%) was the most common organ system affected due to ADRs. Drug was withdrawn in 12 patients, and specific treatment was administered to 32 patients in view of clinical status. Specific treatment for the management of suspected reaction was administered in 32.65% of ADR reports. Based on the outcomes

it can be concluded that relatively high incidence of adverse drug events (32.2%) have been recorded which shows that not only Geriatric patients, but also adults are more susceptible to adverse drug effects. A number of drugs in combination were used, and ADEs often get multiplied. Careful therapeutic monitoring and dose individualization is necessary.

Key words: Adverse drug reactions, Assessment Management, causality, pulmonology.

PPR 014

NEWBORN SCREENING

A. Mayanka*, Pallavi. K

G. Pulla Reddy College of Pharmacy, Hyderabad

Email ID: mayanka.arcot@gmail.com

Newborn screening (NBS) serves as an important preventive public health program to assist families in obtaining early diagnoses, medical interventions and services for newborns affected with rare congenital conditions. Recent advances in screening techniques using tandem mass spectrometry have vastly increased the number of metabolic conditions that can be detected at birth and many NBS programs have expanded their screening panels accordingly, some now screening for more than 50 conditions. Ongoing program expansions and continuing advances in screening technology and medical care means that today, more than ever, clinicians must be fully informed about NBS. We review some of the issues impacting NBS in the USA as food for thought for clinicians faced with fulfilling their expanded role in NBS systems support. This article reviews the current status of NBS using experiences in the USA as an example of how current NBS systems are changing throughout the world. We provide information on recent publications of interest, significant policy and program issues and resources available to assist in coping with NBS advances. For clarification, we will refer to the classical form of NBS (i.e., laboratory analyses from dried blood spots) as newborn dried blood-spot screening (NDBS) and screening for congenital hearing deficiencies in newborns as newborn hearing screening (NHS). The abbreviation 'NBS' will be used to denote the more comprehensive integrated system that can include both NDBS and NHS.

PPR 015

CAPSULE ENDOSCOPY

D. Eshalini*, C. SHALINI

Gurunanak institutions Technical Campus, Ibrahimpatnam, R R Dist.,Telangana

Email ID: eshalini309@gmail.com

"Camera Pill" or "Capsule endoscopy" , is a new diagnostic tool that permits the direct visual examination of the small intestine, an area of the body not previously accessible using upper endoscopy from above or colonoscopy from below. The pill, known as the M2 A capsule endoscopy, is about the size of a multi vitamin and is swallowed with a sip of water. The pill is made of specially sealed bio-compatible material that is resistant to stomach acid and powerful digestive enzymes and thus every care is taken such that the caps will not rupture or burst. Capsule endoscopy helps your doctor evaluate the small intestine. This part of the bowel cannot be reached by traditional upper endoscopy or by colonoscopy. The most common reason for doing capsule endoscopy is to search for a

cause of bleeding from the small intestine.

Key words: capsule endoscopy, small intestine, colonoscopy.

PPR 016

A REVIEW OF RECENT TRENDS IN NON-INVASIVE INSULIN THERAPY FOR DIABETES MELLITUS

K. Navya Sai *, K. Supraja Reddy, Dr. S.Bala Murali Mohan, Dr. K.S Murali Krishna

Department of Pharmacy, MLRIP, Dundigal, Quthbullapur(M), Hyderabad-500043.

E mail ID: dr.navyakudapa@gmail.com

Diabetes mellitus is generally a chronic condition associated with abnormally high levels of sugar (glucose) in the blood. Type I DM/Insulin Dependent Diabetes Mellitus (IDDM) is due to body's inability to produce insulin due to the autoimmune destruction of the beta cells in the pancreas. Type II DM/Noninsulin Dependent Diabetes Mellitus (NIDDM) is due to insulin resistance, inadequate insulin secretion and excessive or inappropriate glucagon secretion. In type I diabetic patients, the treatment is based on administering insulin and diet control. For type II diabetic patients, although insulin is not required initially, but may require the administration of insulin because of decrease in the insulin secretion. Insulin is used for treating diabetes particularly of type I DM and selectively of type II DM patients. Presently available methods of administration of insulin are insulin syringes, insulin infusion pumps, jet injectors, insulin pens and the traditionally used method of administration i.e.; subcutaneous route are of invasive in nature. In order to reduce the pain of the patients, several approaches of non-invasive delivery of insulin are being developed. The newer non-invasive methods available are inhaled insulin, oral insulin, buccal insulin and transdermal delivery of insulin. This study reviews the recent developments in noninvasive delivery of insulin with their formulation aspects and their advantages over invasive delivery of insulin.

Key words: Diabetes Mellitus, insulin, inhaled insulin, oral insulin, buccal route and transdermal route.

PPR 017

ALLERGY IMMUNOTHERAPY: THE FUTURE OF ALLERGY TREATMENT

Azra Farooqui*

MESCO College of Pharmacy, Hyderabad, Telangana

Email ID: azz.farooq@yahoo.co.in

Respiratory allergic disease represents a significant health problem worldwide. Allergic symptoms, such as asthma and hay fever, cause sleep impairment and have adverse effect in one's life. The cost to society is substantial. It is becoming increasingly clear that allergy is a systemic immunological disease initiated by the priming of an adaptive immune response to common allergens. Regardless of the affected organ, allergic respiratory disease is characterized by the presence of allergen-specific IgE antibodies and eosinophilic inflammation. Current clinical guidelines recommend a combination of patient education, allergen avoidance, pharmacotherapy, and allergy immunotherapy for treatment. Allergen avoidance and pharmacotherapy cannot control the disease. Only allergy immunotherapy has disease-modifying potential and should be included in optimal treatment strategies. The capacity to alter the natural course of the disease differentiates allergy immunotherapy from other

treatment modalities. Allergy immunotherapy was first administered as subcutaneous injections and has been practiced for the past 100 years or so. Therefore, spending time, effort, and money on immunotherapy represents an investment that will return sustained benefits from improved prognosis and a relieved burden of disease. Recently, tablet-based sublingual allergy immunotherapy (SLIT) was introduced with comprehensive clinical documentation. SLIT tablets represent a more patient-friendly concept because they can be used for self-treatment at home. Many studies have reported the efficacy of allergy immunotherapy in different allergies, seasonal as well as perennial, and different indications, rhinoconjunctivitis as well as asthma.

Key words: Respiratory allergic disease, immunological disease, immunotherapy, sublingual allergy immunotherapy, patient friendly.

PPR 018

A PROSPECTIVE STUDY ON ACID POISONING AND ITS OUTCOME AT TERTIARY CARE HOSPITAL

Syed Shabbir Hussain*, Md. Rafiuddin, Syed Arifuddin Hashmi, Shaik Aythesaam Ahmed

Department of General Medicine, Osmania General Hospital Hyderabad, T.S

Email ID: syedshabbir06@outlook.

Acid has the third most major poisoning cause in all poisoning cases across India. Our aim was to study on acid poisoning and their outcome at tertiary care hospital and compares the mortality with their respective factors. Information was obtained on 65 patients with relating acid poisoning maximum number of patients were in the age group of 20–29 years. 60.5% of accused were male and 39.5% were female which accounted total cases. Since most of the cases were suicidal in nature, the distribution pattern shows the mental vulnerability and impulsiveness of our youth. The high incidence in case of males may be because they are more exposed to stress and strain due to financial difficulties, loss of job, discord at home and work place, etc. Acid is the third most common type of poison consumed for both homicidal and suicidal purposes. Overall mortality in the present study was 16.5 percent. Most of the cases of poisoning belonged to the lower middle and poor socio-economic group signifying the fact that financial and social problems may have an important bearing in the daily lives of these groups.

Key words: Acid poisoning, suicidal, mortality, Age group, youth, stress, rural areas.

PPR 019

PHENOBARBITONE INDUCED STEVEN JOHNSON SYNDROME (SJS) CASE REPORT

Vinay Aluri*, Sandeep Ankam

CMR College of Pharmacy, Kandlakoya (V) Hyderabad, Telangana – 501401

Email ID: vk10156@gmail.com

Adverse drug reactions (ADRs) are one of the leading causes of death in hospitalized patients. ADR is a response to a drug which is noxious, unintended and occurs at doses normally used in human for prophylaxis and treatment. Steven Johnson syndrome is an immune complex mediated hypersensitivity complex that typically involves the skin and mucous membranes. Steven Johnson syndrome and toxic epidermal necrolysis are rare (TEN 90% SJS less than 10% body surface area

detachment) but life threatening cutaneous adverse drug reactions. Drugs like antiepileptics (Phenobarbitone, phenytoin, lamotrigine), antibiotics (penicillin, cephalosporins, sulphonamides), anti gout drug allopurinol are considered as one of the most common causative factor for these serious ADRs.

Key words: ADRs, TEN, Phenobarbitone, Naranjos scale, Hartwig scale.

PPR 020

HALAVEN: AN ASPIRATION TO LIPOSARCOMA VICTIMS

Ashraf Ameen Khanam*

Sarojini Naidu Vanita Pharmacy Mahavidyalaya, Tarnaka, Hyderabad – 500017

Email ID: ashrafameenakhanam@gmail.com

Sarcoma is a malignant tumor of connective or other non-epithelial tissue. It is a cancer that arises from transformed cells of mesenchymal origin. Diagnosis of sarcoma is extremely rare with less than 20,000 cases diagnosed worldwide annually. Surgery is important in the treatment of most sarcomas, including chemotherapy and radiation therapy. Liposarcoma is a malignant tumor that arises in fat cells in deep soft tissue, inside the thigh or in retro peritoneum. It is a rare type of cancer that bears resemblance to fat cells when examined under microscope. The diagnosis is established by histological examination of the tissue, i.e., biopsy or excision. Annually 2.5 cases occur per million populations. Liposarcoma treatment consists of surgical resection, with chemotherapy not being used outside the investigative setting. Adjuvant radiotherapy may also be used after surgical excision for liposarcoma. The U.S.FDA, on 28th January 2016, approved Halaven (eribulin mesylate), a type of chemotherapy, for the treatment of liposarcoma that cannot be removed by surgery. This treatment is approved for patients who received prior chemotherapy that contained an anthracycline drug. "Halaven is the first drug approved for patients with liposarcoma that has demonstrated an improvement in survival time," said Richard Pazdur, M.D., director of Office of Hematology and Oncology Products in FDA's Center for Drug Evaluation and Research. Halaven is marketed by Eisai based in Woodcliff Lake, New Jersey. This presentation will convey the recent advancement in action of Halaven drug using pharmaceutical research.

Key words: Sarcoma, Liposarcoma, Halaven, Recent Advancement of Halaven drug.

PPR 021

RECENT PHARMACOLOGICAL ADVANCES IN THE TREATMENT OF GASTRO ESOPHAGEAL REFLUX DISEASE

Ayesha Kouser*, Arshee Banu, MD Ilyaz

Deccan School of Pharmacy, Aghapura, Darussalam, Hyderabad.

Email ID:

Gastro esophageal reflux disease (GERD) is a chronic digestive disease that occurs when stomach acid or bile flows back into esophagus (food pipe). The reflux of acid irritates the lining of esophagus and causes GERD. Signs and symptoms of GERD include acid reflux and heartburn. The gastro esophageal reflux disease may be caused due to hiatal hernia, pregnancy, smoking overweight,

heavy exercise, large meals, and peptic ulcers. The three types of medicines to treat GERD are antacids, H2RAs (histamine type 2 receptor antagonists), and PPIs (proton pump inhibitors). The most common surgical procedure used to treat GERD is the Nissen fundoplication. The FDA approved the delayed released drugs such as kapidex (Dexlansoprazole) in the year 2009 which is an proton pump inhibitor used to treat heartburn by decreasing the acid production in the stomach. The FDA also approved another delayed release drug aciphex (Rabeprazole sodium) is in a class of medications called proton-pump inhibitors. It works by decreasing the amount of acid made in the stomach, treating the symptoms of GERD. The medication helps allow the esophagus to heal, and prevent further damage to the esophagus. It is also used to treat conditions in which the stomach produces too much acid, such as Zollinger-Ellison syndrome and to treat ulcers (sores in the lining of the stomach or intestine) and is used in combination with other medications to eliminate H. pylori, a type of bacteria that causes ulcers.

PPR 022

PREVALENCE OF THE PRESCRIPTION OF POTENTIALLY INTERACTING DRUGS: RETROSPECTIVE OBSERVATIONAL STUDY

Mounika Sai. N*, Chandra Boya

Creative Educational Societies College of pharmacy, Kurnool, Andhra Pradesh

Email ID:

The use of multiple medications is becoming more common, with a correspondingly increased risk of untoward effects and drug-related morbidity and mortality. We aimed at estimating the prevalence of prescription of relevant potentially interacting drugs and at evaluating possible predictors of potentially interacting drug exposure. This retrospective observationally analyzed data on prescriptions dispensed from January 2015 to August 2015 on patients of medical wards of private tertiary care hospital. Patients of either gender or subjects who received at least one prescription of both drugs were selected. Drug-drug interactions were screened by using MICROMEDEX. A logistic regression analysis was conducted to examine the predictors of potential Drug-Drug Interaction. A total of 110 were included and analyzed. The mean (SD) age was found to be 53(15) years, 58% were males. Average no diagnosis and average no of medications was found to be 1.5 and 9 respectively. A total of 58 (52%) were prescribed with potentially drug- drug interactions. Atorvastatin and clopidogrel (20%) was the most common observed potential drug-drug interaction followed by metronidazole and ciprofloxacin (15%). On binary logistic regression analysis, being male gender (odds ratio 0.95(0.6-1.5, $p < 0.003$), polypharmacy 1.5(1.0-2.1, $p < 0.004$) were major predictors of potentially drug drug interactions. Prevalence of Potentially drug -drug interactions were found be very high in the medical wards of hospital and polypharmacy is the modifiable risk factor for drug -drug interactions.

PPR 023

COMPARISON OF SITAGLIPTIN AND GLIMEPIRIDE IN PATIENTS WITH TYPE 2 DM WITH INSUFFICIENT RESPONSE ON METFORMIN MONOTHERAPY

Rasiq Hiba*, Shagufta Naaz

Deccan School of Pharmacy, Darussalam, Aghapura, Hyderabad

Email ID: rasiqhiba@gmail.com

Type 2 diabetes mellitus (DM) is a chronic disease which needs lifelong treatment. The objective of this study was to compare safety and efficacy of sitagliptin with glimepiride in patients with type 2 diabetes mellitus inadequately controlled with metformin monotherapy. A randomized, double blinded research was done in patients with type 2 DM and an HbA1c of 6.5–9.0% while on a stable dose of metformin (≥ 1500 mg/day), combined with diet and exercise for at least 12 weeks to receive either sitagliptin 100 mg daily (N = 516) or glimepiride (starting dose 1 mg/day and up-titrated, based upon patient's self-monitoring of blood glucose results, to a maximum dose of upto 6 mg/day) (N = 519) for 30 weeks. The initial investigation assessed whether sitagliptin is non-inferior to glimepiride in reducing HbA1c at week 30 (based on the criterion of having an upper bound of the 95% CI less than the earlier mentioned non-inferiority bound of 0.4%). A total of 40 patients were randomized to receive sitagliptin or glimepiride as add-on therapy. There were 21 patients in sitagliptin group and 19 patients in glimepiride group. Primary end point was the number of patients achieving HbA1C $< 7\%$, while secondary end points were change in HbA1C, fasting blood sugar (FBS) and weight from baseline and the safety profile of the two drugs. Primary end point was reached in 57% patients in sitagliptin group and 52.6% patients in glimepiride group, $p = 0.68$. HbA1C was reduced more in sitagliptin group ($-1.04 \pm 0.2\%$) as compared to glimepiride group (-0.96 ± 0.3). Both groups caused the reduction in FBS. The percentages of patients for whom hypoglycaemia was reported were 7% in the sitagliptin group and 22% in the glimepiride group (percentage-point difference = -15 , $p < 0.001$). Relative to baseline, sitagliptin was associated with a mean weight loss (-0.8 kg), whereas glimepiride was associated with a mean weight gain (1.2 kg). Compared to treatment with glimepiride, treatment with sitagliptin was associated with a lower risk of hypoglycaemia and with weight loss versus weight gain. Sitagliptin is as efficacious as glimepiride in reducing HbA1C and fasting blood sugar.

Key words: Diabetes Mellitus, Sitagliptin, glimepiride, HbA1C, DPP-4 inhibitor.

PPR 024

PORTAL HYPERTENSION

B. Navya*, B. Rajesh, N. Surender

Vikas College of Pharmaceutical Sciences, Suryapet(M), Nalgonda(Dist) - 508 376

Email ID: navyagoud13@gmail.com

Portal hypertension is the main complication of cirrhosis and is defined as a hepatic venous pressure gradient (HVPG) of more than 5 mmHg. Clinically significant portal hypertension is defined as HVPG of 10 mmHg or more. Development of gastro esophageal varices and variceal hemorrhage are the most direct consequence of portal hypertension. Over the last decades significant advancements in the field have led to standard treatment options. These clinical recommendations have evolved mostly as a result of randomized controlled trials and consensus conferences among experts where existing

evidence has been reviewed and future goals for research and practice guidelines have been proposed. Management of varices/variceal hemorrhage is based on the clinical stage of portal hypertension. No specific treatment has shown to prevent the formation of varices. Prevention of first variceal hemorrhage depends on the size/characteristics of varices. In patients with small varices and high risk of bleeding, non-selective β -blockers are recommended, while patients with medium/large varices can be treated with either β -blockers or esophageal band ligation. Standard of care for acute variceal hemorrhage consists of vasoactive drugs, endoscopic band ligation and antibiotics prophylaxis. Transjugular intrahepatic portosystemic shunt (TIPS) is reserved for those who fail standard of care or for patients who are likely to fail ("early TIPS"). Prevention of recurrent variceal hemorrhage consists of the combination of β -blockers and endoscopic band ligation.

Key words: Cirrhosis, Portal hypertension, Varices, Variceal hemorrhage, Primary prophylaxis, Secondary prophylaxis

PPR 026

DRUG UTILIZATION EVALUATION OF ANTIBIOTICS IN GENERAL MEDICINE DEPARTMENT OF A TERTIARY CARE HOSPITAL

K. Soumya Lakshmi*, B. Gowthami, T. Spurthi

Creative Educational Society's College of Pharmacy, Chinnatekur, Kurnool, Andhra Pradesh

Email ID: Soumya.karanam20@gmail.com

Infections are the major reason for the poor prognosis of a condition. Control on infections can be achieved by usage of antibiotics. Just like a coin have two sides; antibiotics also have two sided effects. One is control on infection; the other is resistance to an organism. From a decade, problem of resistance is arising. Drug utilization evaluation is a tool to improve the rationality in prescribing i.e., it helps in monitoring the drug efficacy, cost constraints and other factors related to patient safety. Our present study aims in accessing the drug utilization evaluation of antibiotic usage in a tertiary care hospital which helps in accessing rationality.

Materials & method: A prospective study was conducted for a period of four months from September 2015 to December 2015 in Medicine department of Viswabarathi Hospital, Kurnool, A. P. A total of 210 prescriptions were analyzed. Among the wide range of antibiotics i.e., 479 antibiotics prescribed, beta-lactams were found in the maximum cases which accounts for more than half of the cases. 51.90% i.e. a little more than half of the prescriptions were with two antibiotics, followed by three antibiotic prescriptions. 9.05% prescriptions were with 4-5 antibiotics. Judgemental use of antibiotics will reduce the burden of multi-drug resistance and thereby enabling better patient management and limiting the resultant morbidity and mortality.

Key words: Infections, prescriptions, rationality, antibiotics.

PPR 027

MANAGEMENT OF ADVERSE DRUG REACTIONS OF CHEMOTHERAPY

Madiha Nooreen*, Ayesha Habeeb

Deccan School of Pharmacy, Hyderabad – 500001

Email ID: madienoorn@gmail.com

Chemotherapy-associated side effects vary greatly and it does not depend upon cancer type. But these side effects depend on multiple factors such as the type and dose of chemotherapeutic drug, patient's health status and stage of cancer. The decision to receive chemotherapy involves careful consideration of both the potential benefits and possible risks of therapy. There are substantial short- and long-term side effects from chemotherapy. By convention, short-term side effects include those toxic effects encountered during chemotherapy, while long-term side effects include later complications of treatment arising after the conclusion of adjuvant chemotherapy.

PPR 029

EVIDENCE-BASED ANTIBIOTIC THERAPY OF DIABETIC FOOT INFECTIONS

Vishnupriya Adi*, R.padmavathi

G. Pulla Reddy College of pharmacy, Hyderabad, Telangana - 500028

Email ID: vishnupriyaadi@gmail.com

In addition to proper cleansing, debridement and local wound care, foot infections in diabetic patients require carefully selected antibiotic therapy. Serious infections necessitate hospitalization for initial parenteral broad-spectrum antibiotic therapy. Appropriately selected patients with mild infections can be treated as outpatients with oral (or even topical) therapy. Initial antibiotic selection is usually empirical, but definitive therapy may be modified based on culture results and the clinical response. Therapy should nearly always be active against staphylococci and streptococci, with broader-spectrum agents indicated if Gram-negative or anaerobic organisms are likely. In infected foot tissues levels of most antibiotics, except fluoroquinolones, are often subtherapeutic. The duration of therapy ranges from a week (for mild soft tissue infections) to over 6 weeks (for osteomyelitis). Recent antibiotic trials have shown that several intravenously or orally administered agents are effective in treating these infections, with no one agent or combination emerging as optimal. Suggested regimens based on the severity of infection are provided.

PPR 030

THE WONDERS OF PROBIOTICS

T. Prannoy*, R. Padmavathi

G. Pulla Reddy College of Pharmacy, Mehdiapatnam

Email ID: Prannoytalla@gmail.com

Probiotics are live nonpathogenic microorganisms administered to improve microbial balance, particularly in the gastrointestinal tract. They consist of *Saccharomyces boulardii* yeast or lactic acid bacteria, such as *Lactobacillus* and *Bifidobacterium* species, and are regulated as dietary supplements and foods. Probiotics exert their beneficial effects through various mechanisms, including lowering

intestinal pH, decreasing colonization and invasion by pathogenic organisms, and modifying the host immune response. Probiotic benefits associated with one species or strain do not necessarily hold true for others. The strongest evidence for the clinical effectiveness of probiotics has been in the treatment of acute diarrhea, most commonly due to rotavirus, and pouchitis. More research is needed to clarify the role of probiotics for preventing antibiotic-associated diarrhea, *Clostridium difficile* infection, travelers' diarrhea, irritable bowel syndrome, ulcerative colitis, Crohn's disease, and *vulvovaginal candidiasis*. There is no consensus about the minimum number of microorganisms that must be ingested to obtain a beneficial effect; however, a probiotic should typically contain several billion microorganisms to increase the chance that adequate gut colonization will occur. Probiotics are generally considered safe and well tolerated, with bloating and flatulence occurring most frequently. They should be used cautiously in patients who are critically ill or severely immunocompromised or those with central venous catheters since systemic infections may rarely occur. Bacteria-derived probiotics should be separated from antibiotics by at least two hours. Probiotics have demonstrated efficacy in preventing and treating various medical conditions, particularly those involving the gastrointestinal tract. Data supporting their role in other conditions are often conflicting.

PPR 031

A REVIEW ON PERIPHERAL BLOOD CD4+ T LYMPHOCYTE COUNTS IN HEALTHY ADULT AND CHILDREN

K. Sundeeep*, Dr. B. Veerish

G. Pulla Reddy College of pharmacy, Hydrerabad.Telengana – 500028

Email ID: kadarisundeeep8@gmail.com

The CD4+ T lymphocytes are the crucial cells in the cascade of events in forming immune response to the foreign antigen and hence monitoring the CD4+ T cell counts to understand the extent of immune deficiency is a common practice. CD4+ T cells are also the primary target cells for human immunodeficiency virus (HIV). Hence CD4+ T lymphocyte count is the most important marker of immune dysfunction in HIV disease progression. The estimation of CD4+ T cell counts is used to decide the initiation of anti retroviral therapy (ART), to monitor the efficacy of ART and to start treatment for opportunistic infections (OIs). To develop the threshold levels of CD4+ T cell counts, and to establish the reference ranges for the CD4+ T cell counts in the target population to understand the immune dysfunction. The information on the lower limits of the CD4+ T cells count is necessary to decide the initiation and monitoring of ART. The published data on the CD4+ T cells count in healthy adult and children have been reviewed, analyzed and discussed in this review article.

PPR 032

CHEMOTHERAPY-INDUCED NAUSEA AND VOMITING: OPTIMIZING PREVENTION AND MANAGEMENT

Mohd Amair Ali Hashmi*, Sara Fatima.

Doctor of Pharmacy, Deccan school of pharmacy, Hyderabad

Email ID: amair.hashmi2005@gmail.com

Nausea and vomiting are serious side effects of cancer chemotherapy that can cause significant negative impacts on patients' quality of life and on their ability to tolerate and comply with therapy. Despite advances in the prevention and management of chemotherapy-induced nausea and vomiting (CINV), these side effects remain among the most distressing for patients. To discuss CINV and the current pharmacologic approaches to its management. This article outlines the mechanism of CINV, followed by a review of current approaches to pharmacologic therapy and current practice guidelines from national cancer organizations. This information will help providers and payers understand the optimal management of patients with CINV, including practical considerations and value-based decision making that considers cost issues. Numerous preventive and treatment options are available to manage CINV. Addressing antiemetic regimens requires ongoing patient evaluation to determine the best approach for each individual patient.

Key words: Chemotherapy, Nausea, Vomiting.

PPR 033

PHARMACOVIGILANCE: A REVIEW

Saladi Sri Durga Sreeja*, Dr. Veeresh B.

G. Pulla Reddy College of Pharmacy, Mehdiapatnam, Hyderabad.

Email ID: sreejasaladi16@gmail.com

At an ever-growing scale people are using newer and more effective drugs with various medical conditions which are being manufactured with developing scientific advances. Safety and efficacy are the two major concerns about any drug. Now a day's significance of pharmacovigilance is growing and with the contemporary high-profile drug extractions by the regulatory agencies, consumers and others have become more responsive about the advantage and hazards of remedies. Pharmacovigilance, defined by the World Health Organization as 'the science and series of activities relating to the detection, evaluation, understanding and avoidance of adverse effects or any other drug-related problem' plays an important role in ensuring that patients be given safe drugs. The knowledge of a drug's Adverse Drug Reactions (ADRs) can be augmented by various means such database studies, intensive monitoring, spontaneous reporting, and other new processes at dictatorial and a scientific level are being developed with the intention of escalation pharmacovigilance. On dictatorial level, these include risk management plans and conditional approval and on scientific level, increased patient involvement and transparency are two vital elements. The main objective of review is to unfold various aspects of pharmacovigilance including new methodological developments.

Key words: Pharmacovigilance, Adverse Drug Reactions, WHO, Drug safety, Adverse Events, Pharmacogenomics, Pharmacoenvironmentology.

PPR 034

MOSQUIRIX

A. Sai Akshith*, CH, Rajeshwari

G. Pulla Reddy College Pharmacy, Mehdiapatnam

Email ID: akki.avula@gmail.com

GSK announced today that the Committee for Medicinal Products for Human Use (CHMP) of the European Medicines Agency (EMA) has adopted a positive scientific opinion for its malaria candidate vaccine Mosquirix, also known as RTS'S, in children aged 6 weeks to 17 months. Following this decision, the World Health Organization (WHO) will now formulate a policy recommendation on use of the vaccine in national immunization programmes once approved by national regulatory authorities. RTS,S, which was developed in partnership with the PATH Malaria Vaccine Initiative (MVI). While other vaccines tackle viruses or bacteria, RTS, S has been designed to prevent malaria caused by the *Plasmodium falciparum* parasite, which is most prevalent in sub-Saharan Africa (SSA). In 2013, there were an estimated 584,000 deaths from malaria with around 90% of these occurring in SSA, and 83% in children under the age of five in SSA. Mosquirix (RTS'S) Approved for use by European regulators in July 2015.

PPR 035

POLYCYSTIC OVARIAN SYNDROME: DIAGNOSIS AND MANAGEMENT: ROLE OF A CLINICAL PHARMACIST

N. Prathyusha*, Raghunandhan, Sowmya Das.

Vikas Collage of Pharmaceutical Sciences, Suryapet(M), Nalgonda (Dist),T.S – 508376

Email ID: veenanamani12@gmail.com

Polycystic ovarian syndrome (PCOS) is the most common cause of anovulatory infertility accounting for about 75% of cases. It is defined as a syndrome of ovarian dysfunction associated with Hyperandrogenism and polycystic ovary morphology. The diagnosis of PCOS is based on the presence of at least two of three criteria including: (1) Hyperandrogenaemia (clinical and/or biochemical); (2) Olig-/anovulation; and (3) Polycystic ovaries on ultrasound scan. Several treatment options are available for women with anovulatory infertility related to PCOS including weight reduction, Clomiphene citrate (CC), Gonadotropins, Laparoscopic ovarian diathermy (LOD), Metformin and Letrozole. The role or intervention of a clinical pharmacist has also shown positive feedback in PCOS. Early detection of PCOS can minimize the risk of infertility in females and also further complications and even surgery. The 2007 Thessaloniki ESHRE/ASRM-Sponsored PCOS Workshop Group reached a consensus regarding the therapeutic strategies in infertile women with PCOS. In overweight/obese women with PCOS, weight loss of at least 5–10% should be achieved before any medical intervention. However, Current evidence does not support the routine use of Metformin and very limited clinical data are available on the use of Letrozole, which should only be used in the context of research.

Key words: Infertility, polycystic ovary.

PPR 036

COMPARISON OF B-LACTAM/MACROLIDE COMBINATION THERAPY AND B-LACTAM MONOTHERAPY IN PATIENTS WITH COMMUNITY ACQUIRED PNEUMONIA - IMPACT ON MORTALITY.

Syed Fawaz Hussain*, Md Aslam Ali Hashmi, Meer Mudabbir Ali,
Department of Pharmaceutics, MESCO College of pharmacy, Hyderabad
Email ID: aslam.hashmi03@gmail.com

Pneumonia remains the major cause of morbidity and mortality. Initial antibiotic treatment is the key factor for the resolution of infection and for prognosis, if prescribed as per guideline recommendations. The antibiotic regimens such as β -lactam and macrolide have been associated with improved outcomes. To compare the clinical efficacy of β -lactam plus Macrolide therapy (BLM) in contrast to β -lactam monotherapy (BL) for treating patients with Community acquired-pneumonia. A prospective, observational study with duration of six month was carried out in tertiary care hospital. Patients with pneumonia with age group 18 or higher were included. Primary outcome was mortality. Univariate analyses were performed with chi square test and multivariate odd ratios (OR) were calculated. A total of 108 patients were included in the study of which sixty-six patients (61%) received β -lactam alone and forty-two patients (39%) were treated with combination therapy (BLM). 52 out of 74 patients were initially treated BL monotherapy and 22 patients with BLM combination therapy in ICU. Seventeen patients (16%) died within 14 days after hospital admission. By univariate analysis, patients with BLM therapy had lower mortality (11.9% versus 18.1%; P, 0.383) than those receiving BL alone. Comparatively patients receiving BLM combination therapy were associated with decrease 30 day mortality [odds ratio (OR) 1.64; 95% confidence interval (CI): 0.54 - 5.06]. In comparison with BL monotherapy, combination therapy of B-lactam and Macrolide might reduce mortality risk in patients with CAP. Further studies are required to illustrate the usefulness of BLM combination therapy in the treatment of CAP.

Key words: Pneumonia, Antibiotics, mortality.

PPR 039

ASTONISHING MEDICAL ACHIEVEMENTS

V. Sai Vaishnavi*

MLR Institute of Pharmacy, Dundigal, Hyderabad-500043

Email ID: vaishnavipadu@gmail.com,

Over the last 150 years, the field of medicine has accomplished many astonishing things. Some of these medical achievements are well known and celebrated antibiotics, vaccines, and organ transplants, for example. This is a list of ten recent success stories in the world of medical science, which whether through pioneering technology or sheer staggering effort has accomplished things that most people would have thought miraculous just a few generations ago. Some of them are Tetraplegic women with robotic arm, (the tantalizing possibility of completely paralyzed people being able to regain independence) Intrepid robotic surgeons (two fold advantages) Automatic genetic analysis e (a small device that is capable of analyzing and differentiating DNA in a short amount of time). Gene based cancer therapy (This new process sequencing the DNA and RNA from tumors to find a cancer-causing mutation offers the promise of more effective and focused treatment.)

PPR 040

PREVALENCE AND CAUSALITY ASSESSMENT OF CUTANEOUS ADVERSE DRUG REACTIONS AT TERTIARY CARE HOSPITAL

Safa Riyaz*, Syeda Mehmooda Batool Bushra, Rumana Hameed,
Doctor of Pharmacy, MESCO College of pharmacy, Hyderabad, T.S
Email ID: safa_riyaz07@yahoo.com

Cutaneous Adverse drug reactions (CADRs) are among the most frequent Adverse Drug Events (ADEs). Considering their impact on patient's lives and relatively high incidence, identifying the risks and monitoring of CADRs is of great clinical significance to prevent patient from unwanted exposure to drug toxicity. A prospective, observational and non-invasive study was carried out to determine the prevalence of different types of CADR's and there causal relationship with the offending drug. Assessment was carried out by WHO, Naranjo's and Hartwig's classification graded on a 3-point scale. Descriptive statistics were used to examine the normality of data and describe the analysis. Among 90 cases analyzed 34cases (37.8%) were males and 56 (62.2%) were females. Maximum patients belonged to the age group of 21-30 years (34.4%). The most common CADR observed was steroid induced acne (38.6%) and most common group of offending drugs were topical corticosteroids (38.8%). According to WHO and Naranjo's scale most of the observed cases were classify as probable (97.8%) and as per the Hartwig's classification, 56 cases (62.2%) were moderate in severity. One case (1.1%) was fatal leading to death. A wide range of clinical spectrum of CADRs was observed. Among which steroid induced acne was the most common CADRs seen. Topical corticosteroids were the most common offending agent with highest prevalence in females. Most of the cases were of probable and moderate in severity. Fatal case was observed with Toxic epidermal necrolysis leading to death. Identification and reporting of CADRs is essential in promoting drug safety and better patient care, among health care professionals and patients.

Key words: Cutaneous Adverse Drug Reaction, Toxic Epidermal Necrolysis, Topical Corticosteroids.

G. PULLA REDDY CHARITIES TRUST HYDERABAD

Institutions Sponsored and Managed by the Trust

- G. Pulla Reddy Engineering College, Kurnool.
- G. Pulla Reddy Dental College & Hospital, Kurnool
- G. Pulla Reddy Govt. Polytechnic, Kurnool.
- G. Pulla Reddy College of Pharmacy, Mehdiapatnam, Hyderabad
- G. Pulla Reddy Degree & PG College, Mehdiapatnam, Hyderabad
- G. Pulla Reddy Junior College, Abids Circle, Hyderabad
- G. Pulla Reddy High School, Mehdiapatnam, Hyderabad
- G. Narayanamma High School, Mehdiapatnam, Hyderabad
- G. Narayanamma Institute of Technology & Science (for Women), Shaikpet, Hyderabad
- G. Narayanamma Hospital, Gokavaram, Atmakur, Tq., Kurnool, Kurnool District.
- G. Narayanamma Pulla Reddy Respite Home for Mentally Retorted Women, Kurnool.
- Samskrutha Bhasha Prachara Samiti, Nampally Station Road, Abids, Hyderabad.
- Vignana Peetham (Orphanage), Kurnool.
- Bhakta Kannappa Gurukulam for Welfare of Tribal Children, Gokavaram, Kurnool District.
- Seshacharyulu Hospital, G. Pulla Reddy Engineering College Campus, Kurnool.





G. PULLA REDDY COLLEGE OF PHARMACY

CAMPUS PLACEMENTS - 2014-15

ON CAMPUS PLACEMENTS

Strides Organics, Hyderabad
Indegene Life Systems, Bangalore
Thomson Reuters, Hyderabad
GVK Biosciences, Hyderabad
Infocus Ltd, Hyderabad
Glaxo-Smithkline Consumers-
-Healthcare Ltd., Mumbai
Abbot Health care, Mumbai
Bayer Zydus Ltd, Mumbai
Sanofi India Ltd, Chennai
Novartis Vaccines, Mumbai
Sunrise International, Hyderabad
Neon Laboratories Ltd, Mumbai
SIA Publishers, Hyderabad
I Propat IPR, Hyderabad

OFF CAMPUS PLACEMENTS

Hetero Labs, Hyderabad
Aurobindo Pharma Ltd, Hyd
Source Natural Foods and Herbal-
-Supplements Ltd, Hyderabad
Ranbaxy Ltd, Mumbai
Aizant, Hyderabad
Doctus Software solutions, Hyderabad
Inogen, Hyderabad
Truven Health Analytics, Hyderabad
Shivas Farma Casa, Hyderabad
Global Data, Hyderabad

Number of students selected through Placement cell: **60** (M.Pharm & B.Pharm)

Number of students selected for Internship : **04** (All B. Pharm)

Salary Package range per annum: **1, 20,000 - 4, 00,000/-**



Campus Interviews



Campus Interviews



Campus Interviews



Sipra Innovative Pharma Research Award- 2014



Leading the tradition of Quality & Excellence