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AN INTERNATIONAL CONFERENCE ON NOVEL DRUG DELIVERY SYSTEM

001P: A SURVEY BASED STUDY TO ASSESS KNOWLEDGE ON FOOD DRUG INTERACTIONS AMONG PHARMACY STUDENTS

Knowledge on food drug interactions is necessary to obtain complete therapeutic effect from the medication. Due to lack of awareness they are neglected though interactions may lead to undesired effects. A prospective questionnaire study comprising of 12 questions, each question have both right and wrong options was conducted among pharmacy students to assess their awareness about food drug interactions. The questionnaire was formatted in a simple and easy manner for the understanding of students. These forms are prepared in Google forms and circulated through whatsapp social media and the responses were collected. Total of 215 students participated in the study out of which 43.6% are males and 50.9% are females. Responses were evaluated using Microsoft excel. Most of the students are aware that alcohol is the major drink that causes interactions when taken along with the medication. Almost all the students are aware that milk should not be consumed with tetracyclines. The study also found that students had a limited awareness on food drug interactions. The study findings support the need for the students to update their knowledge through additional training and frequent patient counseling to improve therapeutic efficacy, drug compliance and safety of patients.

Vallampati Prudhvi and Lakshmi Prasanna Jakka A.M.Reddy Memorial college of Pharmacy

002P: CONSEQUENCES OF DRUG INTERACTIONS: A CONCISED REVIEW

Drug-drug interactions arise when the effects of one drug are altered by the co- administration of another interactions are classified as pharmacokinetics -related ,where drug absorption, distribution, metabolism or excretion is affected, or pharmacodynamics- related ,when drugs with similar pharmacological actions are co-prescribed .In pharmacodynamic interactions synergism effect causes increased drug efficacy it causes toxic effects to the body, antagonism effect causes therapeutic failure of the drug. These can be complex and time dependent nature. A found knowledge on drug interaction and their mechanism is required for optimal therapy. In drug interactions enzymes also play a key role in drug interactions. Either by induction and inhibiting mechanisms. Mechanisms involved in enzyme induction may be increased enzyme synthesis, decreased rate of enzyme degradation, enzyme stabilisation or enzyme Inactivation. Mechanism involved in Inhibition decreased drug metabolising ability of an enzyme .The present

review mainly focuses on the way in which the pharmacokinetics and pharmacodynamics gets altered in various conditions and mechanisms involved in drug interaction.

Lakshmi Prasanna Jakka* ,Vallampati Prudhvi, Geetha Rani Valaparla, AMS Sudhakar Babu

A. M. Reddy Memorial College of Pharmacy

003P: PHARMACOLOGICAL EVALUATION OF NOVEL FLAVONE FROM MORUS ALBA IN PENTYLENETETRAZOLE - INDUCED KINDLING AND OXIDATIVE STRESS

The present study was designed to explore the effect of chronic administration of a new flavone [morusflavone, 5,7,4’-trihydroxy-8-(γ,γ-dimethylallyl)-2’,3’-(10’-hydroxy-9’,10’-dimethyl-cyclohex-8-enyl)-flavone (compound 1)] at doses of 25, 50, and 100 mg/kg, orally (p.o.) to pentylenetetrazole-induced kindling in rats (a model of human epilepsy). Compound 1 and four other compounds were isolated from the stem bark of Morus alba. The structure of compound 1 was elucidated and established using standard spectroscopic techniques, and malondialdehyde (MDA) and glutathione (GSH) were estimated as oxidative markers in brain tissues of rodents. The progression of kindling in rats was effectively and significantly suppressed at doses of 25, 50, and 100 mg/kg of compound 1. In addition, increased the levels of MDA and decreased levels of glutathione were also reversed by compound 1 in kindled rats. Compound 1 treatment was able to restore the reduced glutathione level in the brain tissues of PTZ-kindled rats, thus proving its neuroprotective potential.

Gopala Krishna Chinnaboina AM Reddy Memorial College of Pharmacy

004P: SCREENING FOR HYPOGLYCEMIC AND ANXIOLYTIC ACTIVITY ON THE LEAF EXTRACT OF NERIUM ODORUM IN EXPERIMENTAL ANIMALS

Diabetes is a disease that occurs when your blood glucose, is too high. Blood glucose is your main source of energy and comes from the food you eat. Insulin, a hormone made by the pancreas, helps to maintain the blood glucose levels in body. Sometimes body doesn't make enough insulin or doesn't use insulin well. Glucose then stays in blood and doesn't reach to cells. Over time, having too much glucose in blood can cause health problems. Although diabetes has

no cure, can take steps to manage diabetes and stay healthy. Sometimes people call diabetes “a touch of sugar” or “borderline diabetes.” These terms suggest that someone doesn't really have diabetes or has a less serious case, but every case of diabetes is serious.Most symptoms of diabeties are increased urine output, excessive thirst,weight loss, hunger, fatigue, male sexual dysfunction,skin problems,slow healing wounds, yeast infections, andtingling or numbness in the feet or toes. Diabeties screening tests are Random blood glucose test, Urine glucose test, Fasting plasma glucose test,HbA1c test,Oral glucose tolerance test. Oral drugs are available for the diabeties.

Ch.Gopala Krishna. Y.Harshavardhan Reddy A.Harika* K.Ramadevi

A.M. Reddy Memorial College of Pharmacy

005P: PRELIMINARY PHYTOCHEMICAL STUDIES, EVOLUTION OF ANTIMICROBIAL AND IN VITRO CYTOTOXIC STUDIES OF SELECTED POLYHERBAL MIXTURE OF DIETARY IMPORTANCE

Background: In the present study we were evaluated pharmacognostical; antimicrobial and cytotoxic studies of the aqueous and Ethanolic extracts of the dietary polyherbal powders because they are great importance in the treatment of various metabolic disorder. Materials and methods: the following powder mixtures of Malus pumiplus (fruit), Momordica chirata (fruit) powder, Citrus limon (fruit), Pleurotus ostreatus (Mushroom), and Triticum aestivum (wheat grass) were extracted with distilled water and with ethanol. Results and conclusion: The result indicates that the above solvents having better extractive values with good bioactive components like Polyphenols, Glycosides, and Saponins. These are responsible bioactive phytochemical used in the herbal therapy. The aqueous and the Ethanolic were evaluated for The anti-microbial activity by cup plate method and the diameter of zone of inhibition is nearly equal to the standard drug and both the extracts showed potential cytotoxic activity through the in-vitro cytotoxic studies by MTT assay.

Gunji Venkateswarlu, Narra Venkatesh, AMS Sudhakar Babu

A.M. Reddy Memorial College of Pharmacy

006P: PRELIMINARY PHARMACOGNOSTIC AND PHYTOCHEMICAL STUDY ON ARGYREIA CYMOSA ROOT

Ethnomedicinally, the plant Argyreia cymosa (Convolvulaceae) is certainly utilized for numerous disorders in the traditional system; notably it is employed against sexually transmitted ailments, skin problems, diabetes, rheumatism, cough, and quinsy. The primary obstacle accomplished in the standardization of natural medication may be the deficit of appropriate identity of plant origin. Consequently there may be need to set up quality control variables by using pharmacognostic and phytochemical analysis, that may assure the purity, safety, and efficiency of therapeutic herb A. cymosa. To evaluate pharmacognostic features including macroscopic, microscopic and physicochemical parameters of the root of A. cymosa. Micro and Macroscopic features of fresh and dried root samples were explored. Physicochemical variables was done by implementing WHO urged variables, preliminary phytochemical and fluorescent evaluation of root sample had been performed intended for correct recognition and standardization of root of A. cymosa. The colour, shape, size, odor, and surface features had been observed from the root and then powder root material of A. cymosa. Light electron microscope i.e. Olympus CX-21i trinocular Microscope images of cross section of root and powdered root revealed that the existence of cork cells, Xylem fibers with tapered ends, lignified xylem vessels, phloem fibers, medullary rays, sclerides and parenchymatous cells. Phytochemical testing revealed the existence of flavonoids, alkaloids, tannins, phenols, steroids, acid compounds, glycosides, amino acids, and proteins. Physicochemical parameters including moisture content, ash value, extractive value and fluorescent behavior of root powder had been identified. These variables are useful which will distinguish the powdered drug material. The present studies useful in an attempt to augment the data with regards to its standardization, identity and performing additional exploration on Ayurveda approach to medicine.Venkateswarlu G A. M. Reddy Memorial College of Pharmacy

007P: ANTIPYRETIC EFFECT OF METHANOLIC EXTRACTS OF LIMNOPHILA REPENS AND ARGYREIA CYMOSA WHOLE PLANT ON ALBINO RATS

The aim of the study was to evaluate the antipyretic activity of methanolic whole plant extracts of *Limnophila repens* (*L. repens*) and *Argyreia cymosa* (*A. cymosa*) using Brewer's yeast-

induced pyrexia model. It was a randomized controlled experimental study. A total of 60 rats were taken, dividing them into six groups, each containing ten rats. Methanolic extract of L. *repens* (MELR) and *A. cymosa* (MEAC) was administered at 200, and 400mg/kg doses orally to the respective four groups. The control group was fed with normal saline at 2ml/kg. A 20% suspension of Brewer's yeast in normal saline was injected subcutaneously at a dose of 10ml/kg body weight under the nape of the throat of rodents in all groups. Pyrexia produced following ten h of Brewer's yeast injection, and the temperature was recorded. Drugs received soon after the development of pyrexia and temperatures were recorded. Paracetamol at 150ml/kg orally was taken as the conventional medication. The MELR and MEAC were showed significant ($P<0.05$) antipyretic activity at 400mg/kg. Paracetamol showed substantial antipyretic activity from 30min of drug administration to 180min. At 400mg/kg dosage the extracts (MELR and MEAC) revealed a considerable decrease in yeast evoked raised temperature when compared with that of standard drug paracetamol where by the extract dose 200mg/kg had been less effective as compared to the higher dose ($p<0.05$). This research confirmed that MELR and MEAC at a dose of 200 and 400mg/kg own considerable antipyretic outcome against the yeast-induced raised temperature. However, the active chemical constituents responsible for the antipyretic action need to be investigated further.

Venkateswarlu G A. M. Reddy Memorial College of Pharmacy

008P FOOD-DRUG INTERACTIONS: TO BE CONSIDERED SOLEMNLY FOR RATIONAL THERAPY

The effect of the drug on a person may be different than expected as the drug may interact with another drug (drug-drug interaction), food, beverages, dietary supplements the person is consuming (drug-nutrient/food interaction) or another disease the person has (drug-disease interaction). A drug interaction is a situation in which a substance affects the activity of a drug where the effects are increased or decreased or they produce a new effect that neither produces on its own. These interactions may occur out of accidental misuse or due to lack of knowledge about the active ingredients involved in the relevant substances. Regarding food-drug interactions, physicians and pharmacists recognize that some foods and drugs, when taken simultaneously, can alter the body's ability to utilize a particular food or drug, or cause serious side effects. Clinically significant drug interactions, which pose potential harm to the patient,

may result from changes in pharmaceutical, pharmacokinetic, or pharmacodynamic properties. Some may be taken advantage of, to the benefit of patients, but more common drug interactions result in adverse drug events. Therefore, it is advisable for patients to follow the physician and doctors instructions to obtain maximum benefits with least food-drug interactions. This review gives information about various interactions between different foods and drugs and will help patients to take medication cautiously with only suitable food supplement to get the maximum benefit

V. Prudhvi*, J. Lakshmi Prasanna, P. Jyothi, A. M. S. Sudhakar Babu

A.M. Reddy Memorial College of Pharmacy

009P: FORMULATION AND EVALUATION OF CHOCOLATES CONTAINING GUAIFENESIN

A part from the dosage form, organoleptic properties of the drug need to be given is a serious thought during the manufacturing process. Improved patient compliance can be obtained by delivering active pharmaceutical ingredient in an attractive form which results in reduced rejection / psychological inhibition towards dosage forms. The main objective the present investigation is to design and evaluate guaifenesin in the form of chocolate so as to improve patient compliance with ease of administration by all age group of patients. In the present study guaifenensin chocolates were prepared by heat method using cocoa butter, normal butter, cocoa powder, milk powder, icing sugar and sodium benzoate. Prepared chocolates were evaluated for physical appearance, hardness, stability, drug content, melting point and drug release studies. Best formulations of cocoa butter and normal butter were then compared with marketed formulation. Type of butter used in the preparation did not influence much in the drug release pattern from the chocolate form. Chocolates prepared using normal butter gave linear drug release similar to the marketed formulation when compared to the chocolates prepared using cocoa butter. All the formulations were stable for a period of month and concentration of sugar played a role in the taste of chocolate and its acceptance. Guaiphenesin chocolates with satisfactory results were successfully prepared using cocoa butter and normal butter by heating method. It was concluded that chocolates of various drugs with desirable drug release pattern can be prepared to increase patient compliance of different age groups.

*Lakshmi Prasanna J., Sudhakar Babu Ams, Revathi K., Srinivasreddy M., Ashok Kumar B. and Uday Kumar A.

A.M. Reddy memorial college of pharmacy

010P: ANALYTICAL METHOD DEVELOPMENT AND VALIDATION OF AMLODIPINE AND LISINOPRIL TABLETS BY RP-HPLC

The present work describes a simple, rapid, and reproducible reverse phase high performance liquid chromatography (RP-HPLC) method for the simultaneous estimation of amlodipine and lisinopril.columnInertsil 250X 4.6mm, 5µm, C8 and a mobile phase containing KH2PO4 adjusted pH 3.5 using0.1%OPA: methanol (40 : 60 v/v) mixture was used for the separation and quantification. The flow rate was 1.0 mL/min and the eluents were detected by PDA detector at 238 nm. The retention times were found to be 3.411 and 4.605 mins, respectively. The developed method was validated according to ICH guidelines Q2 (R1) and found to be linear within the range of 50–150 µg/mL for both drugs. The developed method was applied successfully for assay of amlodipine and lisinopril.

P. Jyothi*, CH Sravani A.M Reddy memorial College of Pharmacy

011P: ANALYTICAL METHOD DEVELOPMENT AND VALIDATION OF TINIDAZOLE TABLETS RELATED SUBSTANCES BY RP-HPLC

A Simple, precise and accurate method was developed for the estimation of Tinidazole and related impurities analysis. For RP-HPLC method Mobile phase is Acetonirtrile: Methanol: Water (10:20:70) in the ratio of 10:20:70 v/v was selected as a mobile phase gave retention time at 6.0 min for Tinidazole. The column used was Zorbax C-8, 250*4.6mm, 5µm (or) Equivalent with flow rate 1ml/min using UV detection at 320nm. The correlation coefficient of Tinidazole was found to be should not be less than 0.995.The limit of quantification for Tinidazole was found to be 0.2µg/ml. The accuracy was found to be within the limits. The precision was within the acceptance criteria not more than 5.0% for each individual impurity. Hence it is conclude the developed RP-HPLC method can be effectively used for estimation of Tinidazole and their related impurities from pharmaceutical dosage forms.

P. Jyothi*, Y. Suresh Reddy A.M Reddy memorial College of Pharmacy

012P: LAPACHOL INHIBITS GLYCOLYSIS IN CANCER CELLS BY TARGETING PYRUVATE KINASE M2

Reliance on aerobic glycolysis is one of the hallmarks of cancer. Although pyruvate kinase M2 (PKM2) is a key mediator of glycolysis in cancer cells, lack of selective agents that target PKM2 remains a challenge in exploiting metabolic pathways for cancer therapy. We report that unlike its structural analog shikonin, a known inhibitor of PKM2, lapachol failed to induce non-apoptotic cell death ferroxitosis in hypoxia. However, melanoma cells treated with lapachol showed a dose-dependent inhibition of glycolysis and a corresponding increase in oxygen consumption. Accordingly, in silico studies revealed a high affinity-binding pocket for lapachol on PKM2 structure. Lapachol inhibited PKM2 activity of purified enzyme as well as in melanoma cell extracts. Blockade of glycolysis by lapachol in melanoma cells led to decreased ATP levels and inhibition of cell proliferation. Furthermore, perturbation of glycolysis in melanoma cells with lapachol sensitized cells to mitochondrial protonophore and promoted apoptosis. These results present lapachol as an inhibitor of PKM2 to interrogate metabolic plasticity in tumor cells.

Sailendra Mahanta A.M Reddy memorial College of Pharmacy

013P: A Review: Plants and Herbs Used in Anxiety

This review looks at all the herbal medicines and formulas in treating depression and anxiety disorders. Pubmed and the Cochrane Library were searched for pharmacological and clinical evidence of herbal medicines with antidepressant and anti-anxiety action. Good evidence exists for the use of kava and St John swort in the treatment of anxiety and depression respectively, while there is insufficient clinical evidence for the use of many other herbal medicines in psychiatric disorders. Newer herbal preparations that potentially have significant use in depression and anxiety and urgently require more research are Rhodiolarosea (roseroot), Crocus sativus (saffron), Passifloraincarnata (passion flower) and Piper methysticum (kava). They need further evidence base via clinical studies. Depression and anxiety are commonly researched but the efficacy of herbal medicines in these disorders requires attention. The review addresses all the current issues in herbal therapy, safety issues and future areas of application in the field. key words: Herbal medications, depression, anxiety, kava, St John swort, passion flower

Ch Gopala Krishna,Y Harshavardhan Reddy, A Harika * ,K Ramadevi, M Koteswara rao

A.M Reddy memorial College of Pharmacy

014P: ISOLATION, SCREENING AND IDENTIFICATION OF BIOSURFACTANT PRODUCING FUNGAL STRAINS

Biosurfactants are the surface active compounds which are of microbial origin that are produced by different strains of bacteria fungi and actinomycetes. Soil samples were collected and 10 fungal colonies were isolated using pour plate method. Out of 10 fungal strains three were selected for further studies based on foaming activity. Preliminary and confirmatory tests were used for the identification of biosurfactant produced by three fungal strains. PS7 showed high biosurfactant production in emulsification index compared to other isolates. In this study morphology of fungal isolates were seen using trinocular microscope. Biosurfactants had different applications in the areas of oil recovery, cosmetics, agriculture, food processing.

K. Revathi Sushma , G. Sai Kiranmai , D. Nandini , G. Gowtham , L. Mallikarjunarao and Dr. A. M. S Sudhakar Babu.

A.M. Reddy Memorial College of Pharmacy

015P: ULTRASOUND-MEDIATED OXYGEN DELIVERY FROM CHITOSAN NANOBUBBLES

Ultrasound (US) energy combined with gas-filled microbubbles has been used for several years in medical imaging. This study investigated the ability of oxygen-loaded chitosan bubbles to exchange oxygen in the presence or in the absence of US. Oxygen delivery is enhanced by sonication and both frequency and time duration of US affected the exchange kinetics.

V.Lokesh reddy, E. Suresh Kumar A.M. Reddy Memorial College of Pharmacy

016P: DETERMINATION OF ATAZANAVIR IN PHARMACEUTICAL DOSAGE FORM USING VALIDATED RP-HPLC METHOD

A validated RP HPLC method for the estimation of atazanavir in capsule dosage form on YMC ODS 150 × 4.6 mm, 5 µ column using mobile phase composition of ammonium dihydrogen phosphate buffer (pH 2.5) with acetonitrile (55:45 v/v). Flow rate was maintained at 1.5 mL/min with 288 nm UV detection. The retention time obtained for atazanavir was at 4.7 min. The detector response was linear in the concentration range of 30 - 600 µg/mL. This method has been validated and shown to be specific, sensitive, precise, linear, accurate, rugged, robust and fast. Hence, this method can be applied for routine quality control of atazanavir in capsule dosage forms as well as in bulk drug.

D. Suman, B. Mallikarjun Rao. **A.M. Reddy Memorial College of Pharmacy**

017P: PREPARATION AND CHARACTERIZATION OF ECHOGENIC LIPID–PLURONIC NANOBUBBLES

The advent of microbubble contrast agents has enhanced the capabilities of ultrasound as a medical imaging modality and stimulated innovative strategies for ultrasound-mediated drug and gene delivery. In this work, we present a novel strategy for formulation of nanosized, echogenic lipid bubbles by incorporating the surfactant Pluronic, a triblock copolymer of ethylene oxide copropylene oxide coethylene oxide into the formulation. We conclude that Pluronic is effective in lipid bubble size control, and Pluronic Mw, hydrophilic–lipophilic balance (HLB), and Pluronic/ lipid ratio are critical determinants of the bubble size. Most importantly, our results have shown that although the bubbles are nanosized, their stability and in vitro and in vivo echogenicity are not compromised. The resulting nanobubbles may be better suited for contrast enhanced tumor imaging and subsequent therapeutic delivery.

M.Jhansi Rani, V. Leela Krishna A.M. Reddy Memorial College of Pharmacy

018P: DEVELOPMENT AND VALIDATION OF RP-HPLC METHOD FOR QUANTITATIVE ESTIMATION OF RITONAVIR IN BULK AND PHARMACEUTICAL DOSAGE FORMS

A simple, precise, specific and accurate reverse phase HPLC method has been developed for the determination of Ritonavir in bulk and pharmaceutical dosage forms. The chromatographic separation was achieved on Symmetry C18 (4.6 x 100mm, 3.5 µm) column using a mixture of Buffer: Acetonitrile (50:50) as the mobile phase at a flow rate 1.0 ml/min. Linearity was observed in concentration range of 50-150µg/ml. The retention time of Ritonavir was 5.1 min. The analyte was monitored using UV detector at 239 nm. Results of analysis were validated statistically and by recovery studies. The method was validated according to the ICH guidelines with respect to specificity, linearity, accuracy, precision and robustness.

G. Tejaswini, Ch. Bala Sudhakar A.M. Reddy Memorial College of Pharmacy

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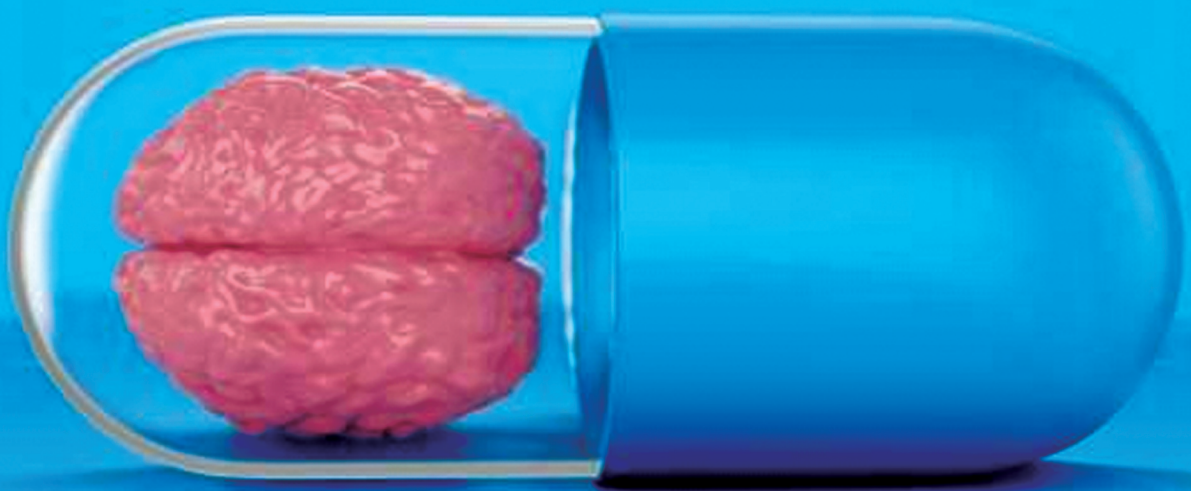

AN INTERNATIONAL SEMINAR ON NEW TRENDS IN FIELD OF PHARMACY

001P: FORMULATION OF POLY HERBAL HAND WASH WITH ANTIMICROBIAL ACTIVITTY

Article history Received 21/03/2017 Available online 31/03/2017 Keywords Herbal Hand Wash, Antimicrobial Activity, Reetha, Mimosa Pudica. Hand hygiene is vital principle and exercise in the prevention, control and reduction of health care acquired infections. To avoid the adverse effects like itching, irritation, dermatitis etc.,of the synthetic hand wash formulations an attempt has been made to formulate a polyherbal hand wash by using herbs which have antimicrobial property. The ethanolic extracts of leaves of Mimosa pudica (touch me not), Azadirachta indica(neem) and fruits of Sapindus mukorossi(reetha). The antimicrobial activity of prepared hand wash formulations was checked against skin pathogens Bacillus subtilis, Escherichia coli by cup plate method. Two herbal formulations showed significant antimicrobial activity than the commercially available standard hand wash(synthetic-dettol, herbal-pathanjali). So these plants materials can be used in the preparation of herbal hand wash on commercial scale.

Katakam Revathi Sushma* , Pedarla Bhavya sree,Vasimalla Anitha, Shaik Azharuddin, Mogudumpuram Hemanth, A. M. S. Sudhakarbabu

A.M.Reddy Memorial College of Pharmacy

002P: FORMULATION AND EVALUATION OF HERBAL ANTI-ACNE FACE WASH"

Acne is an inflammatory disease of sebaceous follicles of skin. Natural remedies are more acceptable in the belief that they are safer with fewer side effects than the synthetic ones. Herbal formulations have growing demand in the market. The present work deals with the development and evaluation of the herbal anti-acne face wash containing aqueous extracts of roots of burdock, liquorice, shahi jeera, orange peel and fruit of nut meg. Although various topical herbal formulations available in the market, we propose to make pure herbal formulation without any synthetic ingredient. The plants have been reported in literature having good anti-microbial, anti-oxidant and anti-inflammatory properties. Various formulation batches i.e., F1 to F5 were prepared using Xanthan gum in varied concentrations. Prepared formulations were evaluated for various physical parameters like colour, appearance, washability, pH, Spreadability and anti-microbial activity. Optimised batch of formulation compared with marketed formulation. Amongst all the formulation studies F2 was found optimum for all the parameters.

Jhansi Rani M.*, Akhil S., Triveni T., Revathi P.4, Lakshmi Prasanna J. and Dr. A. M. S. Sudhakar Babu

A.M.Reddy Memorial College of Pharmacy

003P: EVALUATION OF ANTIDEPRESSANT ACTIVITY OF LEAF EXTRACT OF TERMINELIA CATAPPA IN EXPERIMENTAL ANIMALS

Terminalia catappa (combretaceae) is a traditional medicinal plant known as almond tree. This plant has been used for the treatment of a variety of diseases. The leaves of Terminalia catappa showed anti microbial, anti sickiling, anti ulcer activities. Methods: This study was undertaken to evaluate the possible antidepressant effect of Terminalia catappa leaf extract (AETC) using Tail suspension test(TST) & Forced swim test (FST). 24 albino mice of either sex weighing between 18-25gm were randomly selected and divided into 4 equal groups. Group-I (control) received 1%CMC (10ml/1000gm), Group-II, standard(25mg/kg fluoxetine) III & IV received AETC in doses of 250,500 mg/kg orally (P.O.) respectively. Drug treatment was given before 30 minutes. 30 minutes after last dose of drug or standard the immobility period was recorded. Results: AETC produced significant antidepressant like effect at dose of 500 mg/kg as indicated by reduction in immobility times of mice in TST & FST. The efficacy of AETC at 500mg/kg was found to be comparable to that of Fluoxetine at doses of 25mg/kg. Conclusion: The results of the present study indicate that AETC possesses significant antidepressant activity compared to that of Fluoxetine.

Gopala Krishna Ch *, Vardhini K., Nagamani J., Sri lakshmi G., Raghu Ram N. and Tharun B.

A M Reddy Memorial College of Pharmacy

004P: ADVANCING CHEMICAL CARCINOGENICITY PREDICTION MODELING: OPPORTUNITIES AND CHALLENGES

Carcinogenicity assessment of any compound is a laborious and expensive exercise with several associated ethical and practical concerns. While artificial intelligence (AI) offers promising solutions, unfortunately, it is contingent on several challenges concerning the inadequacy of available experimentally validated (non)carcinogen datasets and variabilities within bioassays, which contribute to the compromised model training. Existing AI solutions that leverage classical chemistry-driven descriptors do not provide adequate biological interpretability involved in imparting carcinogenicity. This highlights the urgency to devise alternative AI strategies. We propose multiple strategies, including implementing data-driven (integrated databases) and known carcinogen-characteristicderived features to overcome these apparent shortcomings. In summary, these next-generation approaches will continue facilitating robust chemical carcinogenicity prediction, concomitant with deeper mechanistic insights.

M.Jhansi, K. Chaitanya A M Reddy Memorial College of Pharmacy

005P: ARTIFICIAL INTELLIGENCE-DRIVEN DRUG DEVELOPMENT AGAINST AUTOIMMUNE DISEASES

Artificial intelligence (AI)-based predictive models are being used to foster a precision medicine approach to treat complex chronic diseases such as autoimmune and autoinflammatory disorders (AIIDs). In the past few years the first models of systemic lupus erythematosus (SLE), primary Sjögren syndrome (pSS), and rheumatoid arthritis (RA) have been produced by molecular profiling of patients using omic technologies and integrating the data with AI. These advances have confirmed a complex pathophysiology involving multiple proinflammatory pathways and also provide evidence for shared molecular dysregulation across different AIIDs. I discuss how models are used to stratify patients, assess causality in pathophysiology, design drug candidates in silico, and predict drug efficacy in virtual patients. By relating individual patient characteristics to the predicted properties of millions of drug candidates, these models can improve the management of AIIDs through more personalized treatments.

E. Suresh Kumar, V.Lokesh Reddy A M Reddy Memorial College of Pharmacy

006P: MODULATION OF T CELLS BY TRYPTOPHAN METABOLITES IN THE KYNURENINE PATHWAY

Lymphocytes maturing in the thymus (T cells) are key factors in adaptive immunity and the regulation of inflammation. The kynurenine pathway of tryptophan metabolism includes several enzymes and compounds that can modulate T cell function, but manipulating these pharmacologically has not achieved the expected therapeutic activity for the treatment of autoimmune disorders and cancer. With increasing knowledge of other pathways interacting with kynurenines, the expansion of screening methods, and the application of virtual techniques to understanding enzyme structures and mechanisms, details of interactions between kynurenines and other pathways are being revealed. This review surveys some of these alternative approaches to influence T cell function indirectly via the kynurenine pathway and summarizes the most recent work on the development of compounds acting directly on the kynurenine pathway.

B. Mallikarjun rao, D. Suman Kumar A M Reddy Memorial College of Pharmacy

007P: STRIKING A GUT–LIVER BALANCE FOR THE ANTIDIABETIC EFFECTS OF METFORMIN

Metformin is the most prescribed drug for the treatment of type 2 diabetes mellitus (T2DM), but its mechanism of action has not yet been completely elucidated. Classically, the liver has been considered the major site of action of metformin. However, over the past few years, advances have unveiled the gut as an additional important target of metformin, which contributes to its glucoselowering effect through new mechanisms of action. A better understanding of the

mechanistic details of metformin action in the gut and the liver and its relevance in patients remains the challenge of present and future research and may impact drug development for the treatment of T2DM. Here, we offer a critical analysis of the current status of metformin-driven multiorgan glucose-lowering effects.

G. Tejaswini, Ch. Bala Sudhakar A M Reddy Memorial College of Pharmacy

008P: PROTEIN–PROTEIN INTERACTIONS: DEVELOPING SMALL-MOLECULE INHIBITORS/STABILIZERS THROUGH COVALENT STRATEGIES

The development of small-molecule inhibitors or stabilizers of selected protein– protein interactions (PPIs) of interest holds considerable promise for the development of research tools as well as candidate therapeutics. In this context, the covalent modification of selected residues within the target protein has emerged as a promising mechanism of action to obtain small-molecule modulators of PPIs with appropriate selectivity and duration of action. Different covalent labeling strategies are now available that can potentially allow for a rational, ground-up discovery and optimization of ligands as PPI inhibitors or stabilizers. This review article provides a synopsis of recent developments and applications of such tactics, with a particular focus on site-directed fragment tethering and proximityenabled approaches.

A.Sahithisri, K. Manasa A M Reddy Memorial College of Pharmacy

009P: COMPUTATIONAL AND ARTIFICIAL INTELLIGENCE-BASED METHODS FOR ANTIBODY DEVELOPMENT

Due to their high target specificity and binding affinity, therapeutic antibodies are currently the largest class of biotherapeutics. The traditional largely empirical antibody development process is, while mature and robust, cumbersome and has significant limitations. Substantial recent advances in computational and artificial intelligence (AI) technologies are now starting to overcome many of these limitations and are increasingly integrated into development pipelines. Here, we provide an overview of AI methods relevant for antibody development, including databases, computational predictors of antibody properties and structure, and computational antibody design methods with an emphasis on machine learning (ML) models, and the design of complementaritydetermining region (CDR) loops, antibody structural components critical for binding.

S. Tharun, K. Bala Krishna A M Reddy Memorial College of Pharmacy

010P: PROGRANULIN AS A THERAPEUTIC TARGET IN NEURODEGENERATIVE DISEASES

Progranulin (PGRN, encoded by the GRN gene) plays a key role in the development, survival, function, and maintenance of neurons and microglia in the mammalian brain. It regulates lysosomal biogenesis, inflammation, repair, stress response, and aging. GRN loss-of-function mutations cause neuronal ceroid lipofuscinosis or frontotemporal dementia-GRN (FTD-GRN) in a gene dosage-dependent manner. Mutations that reduce PGRN levels increase the risk for developing Alzheimer's disease, Parkinson's disease, and limbicpredominant age-related transactivation response DNA-binding protein 43 encephalopathy, as well as exacerbate the progression of amyotrophic lateral sclerosis (ALS) and FTD caused by the hexanucleotide repeat expansion in the C9orf72 gene. Elevating and/or restoring PGRN levels is an attractive therapeutic strategy and is being investigated for neurodegenerative diseases through multiple mechanisms of action.

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011P: NETWORK PHARMACOLOGY: CURING CAUSAL MECHANISMS INSTEAD OF TREATING SYMPTOMS

For complex diseases, most drugs are highly ineffective, and the success rate of drug discovery is in constant decline. While low quality, reproducibility issues, and translational irrelevance of most basic and preclinical research have contributed to this, the current organ-centricity of medicine and the 'one disease–one target–one drug' dogma obstruct innovation in the most profound manner. Systems and network medicine and their therapeutic arm, network pharmacology, revolutionize how we define, diagnose, treat, and, ideally, cure diseases. Descriptive disease phenotypes are replaced by endotypes defined by causal, multitarget signaling modules that also explain respective comorbidities. Precise and effective therapeutic intervention is achieved by synergistic multicompound network pharmacology and drug repurposing, obviating the need for drug discovery and speeding up clinical translation.

K. Sravani, K. Narsu Kumari A M Reddy Memorial College of Pharmacy

012P: 3D MODELS OF NEURODEGENERATION: IMPLEMENTATION IN DRUG DISCOVERY

A lack of in vitro models that robustly represent the complex cellular pathologies underlying neurodegeneration has resulted in a translational gap between in vitro and in vivo results, creating a bottleneck in the development of new therapeutics. In the past decade, new and complex 3D models of the brain have been published at an exponential rate. However, many novel 3D models of neurodegeneration overlook the validation and throughput requirements for implementation in drug discovery. This therefore represents a knowledge gap that could hinder the translation of these models to drug discovery efforts. We review the recent progress in the development of 3D models of neurodegeneration, examining model design benefits and validation techniques, and discuss opportunities and standards for 3D models of neurodegeneration to be implemented in drug discovery and development.

K. Narasimha Rao, M. Diwakar

013P Consequences of Drug Interactions: A Concised Review 2018

Drug-drug interactions arise when the effects of one drug are altered by the co- administration of another interactions are classified as pharmacokinetics -related ,where drug absorption, distribution, metabolism or excretion is affected, or pharmacodynamics- related ,when drugs with similar pharmacological actions are co-prescribed .In pharmacodynamic interactions synergism effect causes increased drug efficacy it causes toxic effects to the body, antagonism effect causes therapeutic failure of the drug. These can be complex and time dependent nature. A found knowledge on drug interaction and their mechanism is required for optimal therapy. In drug interactions enzymes also play a key role in drug interactions. Either by induction and inhibiting mechanisms. Mechanisms involved in enzyme induction may be increased enzyme synthesis, decreased rate of enzyme degradation, enzyme stabilisation or enzyme Inactivation. Mechanism involved in Inhibition decreased drug metabolising ability of an enzyme .The present review mainly focuses on the way in which the pharmacokinetics and pharmacodynamics gets altered in various conditions and mechanisms involved in drug interaction. Keywords: Drug-Drug interactions, Enzyme induction, Enzyme inhibition, Pharmacodynamics, Pharmacokinetics.

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014P SCREENING FOR HYPOGLYCEMIC AND ANXIOLYTIC ACTIVITY ON THE LEAF EXTRACT OF NERIUM ODORUM IN EXPERIMENTAL ANIMALS 2018

Diabetes is a disease that occurs when your blood glucose, is too high. Blood glucose is your main source of energy and comes from the food you eat. Insulin, a hormone made by the pancreas, helps to maintain the blood glucose levels in body. Sometimes body doesn't make enough insulin or doesn't use insulin well. Glucose then stays in blood and doesn't reach to cells. Over time, having too much glucose in blood can cause health problems. Although diabetes has no cure, can take steps to manage diabetes and stay healthy. Sometimes people call diabetes “a touch of sugar” or “borderline diabetes.” These terms suggest that someone doesn't really have diabetes or has a less serious case, but every case of diabetes is serious.Most symptoms of diabeties are increased urine output, excessive thirst,weight loss, hunger, fatigue, male sexual dysfunction,skinproblems,slow healing wounds, yeast infections, andtingling or numbness in the feet or toes. Diabeties screening tests are Random blood glucose test, Urine glucose test, Fasting plasma glucose test,HbA1ctest,Oral glucose tolerance test. Oral drugs are available for the diabeties.

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015: PHARMACOLOGY AND EFFECTS OF CANNABIS: A BRIEF REVIEW

To highlight recent knowledge of mechanisms of action, effects on psychomotor and cognitive performance, and health risks associated with cannabis consumption. A brief review of recent literature on the prevalence of recreational cannabis use, the potency of modern cannabis preparations and the pharmacological actions of cannabis. Cannabinoids derived from herbal cannabis interact with endogenous cannabinoid systems in the body. Actions on specific brain receptors cause dose-related impairments of psychomotor performance with implications for car and train driving, aeroplane piloting and academic performance. Other constituents of cannabis smoke carry respiratory and cardiovascular health risks similar to those of tobacco smoke. Cannabis is not, as widely perceived, a harmless drug but poses risks to the individual and to society.

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016P: CLINICAL PHARMACOLOGY OF METHAMPHETAMINE

To examine the literature regarding clinical pharmacokinetics, direct effects and adverse clinical outcomes associated with methamphetamine use. Relevant literature was identified through a PubMed search. Additional literature was obtained from relevant books and monographs. The mean elimination half-life for methamphetamine is approximately 10 hours, with considerable inter-individual variability in pharmacokinetics. Direct effects at low-to-moderate methamphetamine doses (5–30 mg) include arousal, positive mood, cardiac stimulation and acute improvement in cognitive domains such as attention and psychomotor coordination.

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017P : BIOCHEMISTRY AND PHARMACOLOGY OF ENDOVANILLOIDS

Endovanilloids are defined as endogenous ligands and activators of transient receptor potential (TRP) vanilloid type 1 (TRPV1) channels. The first endovanilloid to be identified was anandamide (AEA), previously discovered as an endogenous agonist of cannabinoid receptors. In fact, there are several similarities, in terms of opposing actions on the same intracellular signals, role in the same pathological conditions, and shared ligands and tissue distribution, between TRPV1 and cannabinoid CB_1 receptors. Here we discuss the mechanisms for the regulation of the levels of the proposed endovanilloids, as well as their TRPV1-mediated pharmacological actions in vitro and in vivo. Furthermore, we outline the possible pathological conditions in which endovanilloids, acting at sometimes aberrantly expressed TRPV1 receptors, might play a role.

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018P: THE PHARMACOLOGY OF ERGOTAMINE AND DIHYDROERGOTAMINE.

The ergot alkaloids are a family of chemical entities that have many pharmacologic effects. Their diversity results from their interaction with multiple receptors, their variable receptor affinity and intrinsic activity, and their variable organ-specific receptor access. Ergotamine tartrate (ET) was one of the first ergot alkaloids to be isolated. Dihydroergotamine (DHE) is synthesized by reducing an unsaturated bond in ergotamine (E); this modification results in a changed pharmacologic profile. Dihydroergotamine exhibits greater alpha-adrenergic antagonist activity and much less potent arterial vasoconstriction and emetic potential. The long duration of action appears to result from active metabolites and tight tissue binding. Intranasal (IN) administration of DHE delivers adequate plasma concentrations of the drug without the need for parenteral administration and should further expand its role in migraine pharmacotherapy.

K. Sharvani, K. Narasimha rao A.M. Reddy Memorial College of Pharmacy

019P: Pharmacognostic study and anti-inflammatory activity of Callistemon lanceolatus leaf

To study detail pharmacognosy and anti-inflammatory activity of Callistemon lanceolatus (C. lanceolatus) leaf. Leaf sample was studied by organoleptic, macroscopical, microscopical, phytochemical and other WHO recommended methods for standardizations. The methanolic leaf extract of the plant was also screened for anti-inflammatory activity on carrageenan-induced paw edema in rat at doses of 200 and 400 mg/kg, orally. C. lanceolatus methanolic leaf extract showed significant ($P<0.05$) anti-inflammatory activity at doses of 200 mg/kg and 400 mg/kg. This significant anti-inflammatory of C. lanceolatus methanolic leaf extract at the dose of 400 mg/kg was comparable with diclofenac sodium. The pharmacognostic profile of the C. lanceolatus leaf is helpful in standardization for quality, purity and sample identification. The methanolic extract at a dose of 400 mg/kg shows a significant activity in comparison with the standard drug diclofenac sodium (50 mg/kg).

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020P: FORMULATION AND EVALUATION OF FLOATING DRUG DELIVERY SYSTEM OF FAMOTIDINE

A multiple unit oral floating drug delivery system of famotidine was developed to prolong gastric residence time, target stomach mucosa and increase drug bioavailability. Drug and polymer compatibility was studied by subjecting physical mixtures of drug and polymers to differential scanning calorimetry. Cod liver oil entrapped calcium alginate beads containing famotidine, capable of floating in the gastric condition were formulated and evaluated. The beads were evaluated for percent drug loading, drug entrapment efficiency, buoyancy and *in vitro* drug release. The *in vitro* drug release study of the beads was carried out in simulated gastric media employing a modified Rosette-Rice test apparatus.

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021P: PHARMACOLOGY AND THERAPEUTICS OF BRONCHODILATORS

Bronchodilators are central in the treatment of of airways disorders. They are the mainstay of the current management of chronic obstructive pulmonary disease (COPD) and are critical in the symptomatic management of asthma, although controversies around the use of these drugs remain. Bronchodilators work through their direct relaxation effect on airway smooth muscle cells. Several once-daily β2-AR agonists or ultra-long-acting β2-AR-agonists (LABAs), such as indacaterol, olodaterol, and vilanterol, are already in the market or under development for the treatment of COPD and asthma, but current recommendations suggest the use of LABAs only in combination with an inhaled corticosteroid. In addition, some new potentially long-acting antimuscarinic agents, such as glycopyrronium bromide (NVA-237), aclidinium bromide, and umeclidinium bromide (GSK573719), are under development, as well as combinations of several classes of long-acting bronchodilator drugs, in an attempt to simplify treatment regimens as much as possible. This review will describe the pharmacology and therapeutics of old, new, and emerging classes of bronchodilator.

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