International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

Abstract Book

Proceedings of APP 11th ANNUAL CONVENTION AND 5th INDO SWISS CONFERENCE 16 – 17, DEC-2022

ST. PAULS COLLEGE OF PHARMACY, RANGA REDDY, TELANGANA – 501510

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU01

FORMUALATION OPTIMIZATION AND EVALUATION OF TRANSDERMAL DRUG DELIVERY SYSTEM OF FELODIPINE

E Praveen [1*], Dr Somnath De [2*], Dr K Venu Madhav [3*]

1 Department of Pharmaceutics, St Paul's College of Pharmacy, Turkayamjal (V), R. R Dist, TS, India*

*2*Department of Pharmacology, St Paul's College of Pharmacy, Turkayamjal (V), R. R Dist, TS, India*

3 Department of Pharmaceutics, St Paul's College of Pharmacy, Turkayamjal (V), R. R Dist, TS, India*

Felodipine, a BCS class II calcium channel blocker, is utilized in the administration of hypertension and angina pectoris. Because of the unfortunate dissolvability and low bioavailability of the medication, there is a need to plan an elective course to accomplish a consistent plasma convergence of felodipine for its greatest remedial utility and can be accomplished by transdermal route. In this review, framework type transdermal patches were arranged utilizing various blends of hydrophilic polymer, to be specific, polyvinylpyrrolidone (PVP) and hydrophobic polymer, in particular, ethyl cellulose (EC) by dissolvable dissipation procedure and were oppressed for characterization. The Fourier change infrared examinations affirmed the similarity among medication and polymers. The patches F1 to F7exhibited uniform weight going from 153.3mg to 242.6mg And thickness of F1 to F7 are going from 0.133 to 0.22mm. Among the different clusters, the consistency weight and thickness shows that the polymeric arrangement of the medication is all around scattered in the patches. Every one of the details (F1 to F7) showed genuinely uniform medication content going from 95.77% to 98.67% individually. it is obviously demonstrated that the Felodipine transdermal patches containing Eudragit RS 100 in the proportion of 1:2 (F6) was the best detailing among the pre-arranged patches.

Key words: Felodipine Calcium channel blocker, Transdermal, Permeation, Invitro release studies.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU02

A QUALITY BY DESIGN CONCEPT ON POLYMER BASED NANOPARTICLES CONTAINING ANTI-ALZHEIMER'S DRUG

Damineni Saritha

Sultan ul Uloom College of Pharmacy, Hyderabad

The objective of this investigation was to prepare polymeric nanoparticles (PNPs) of Rivastigmine Tartrate and to characterize the physicochemical properties of PNPs. A series of PNPs were prepared by modified solvent emulsification diffusion technique using polymer, surfactant and solvents. Zeta potential of optimized formulation was found to be +35.81 mV indicating stable formulation. The particle size of nanoparticles was found in the range of 247±15 to 459±11 nm. The PDI of all formulations was found to be in the range of 0.374-0.719, which concluded that prepared nanoparticle was mono dispersed in nature. Entrapment efficiency of nanoparticles was found in the range of 41.62 ± 1.5 to 51.47 ± 1.8%. The drug release at 24th hour was found in the range of 86.72±0.97 to 97.81±0.26% for various formulations. We concluded that Glycol Chitosan nanoparticles have the potential to be used as smart carriers to deliver Rivastigmine Tartrate to brain cells

Key words: Alzheimer's disease; Rivastigmine Tartrate; Polymeric nanoparticles; Glycol Chitosan

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU03

A REVIEW ON FORMULATION AND EVALUATION OF FAST DISSOLVING TABLETS

K N Lakshmi Shivani[1], J S Rudra Bhavani[2], P Roshan Ali[3], P Kishore Kumar[4] Narendra Pentu[*]

[1] *Student, CMR College of Pharmacy, Medchal-501401.*

[2] *Student, CMR College of Pharmacy, Medchal-501401*

[3] *Assistant Professor, Department of Pharmacology, CMR College of Pharmacy. Medchal-501401.*

[4] *Assistant Professor, Department of Pharmacology, CMR College of Pharmacy. Medchal-501401*

[*] *Assistant Professor, Department of Pharmaceutics, CMR College of Pharmacy. Medchal- 501401.*

ODT's are meant for compressed solid content which should convert into solution from within the oral cavity by saliva itself. This type of approach is gaining importance especially for pediatrics and geriatrics patients. There are a number of methods established for preparing ODT's including patented technologies. Every method has its own importance in formulation prospects. So, we cannot judge the specificity of the method. Key ingredients present in formulation are -superdisintegrants, diluents, emulsifiers, sweeteners, flavoring agents. Out of all the key ingredients superdisintegrants play the major role in the formulation of ODT; these superdisintegrants can be natural like Plantago husk mucilage, gellan gum, Locust bean gum, Fenugreek seed mucilage, Soy polysaccharide, Mango peel pectin, Banana powder etc; and the artificial ones are sodium starch glycolate, crospovidone, croscarmellose sodium, cross linked alginic acid, calcium silicate, magnesium aluminum silicate etc. The various methods used for the formulation are freeze drying, molding method, melt granulation, mass extrusion, sublimation, direct compression, cotton candy process, spray drying, nano ionization. The evaluation parameters are tablet thickness, weight variation, friability, hardness, wetting time, disintegration time, in vivo disintegration time, dissolution test and stability study. As per the present study we explore the formulation and evaluation related parameters for further scope to apply to all the drugs without any specifications.

Key word: ODT [oral disintegrating tablets], Super disnintergrants, Emulsifiers, Disintegration time, Mucilage.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU04

DESIGN FORMULATION, OPTIMIZATION AND EVALUATION OF MUCOADHESIVE MICROSPHERES OF CAPTOPRIL

R.Prasanthi*

Research Scholar, Department of Pharmacy, Annamalai University, Annamalai Nagar, Tamil Nadu, India.

Create mucoadhesive captopril microspheres with extended retention in the upper gastro intestinal tract to improve absorption and bioavailability was the goal of the current study. The microspheres were created using the ionic gelation method. A variety of sodium alginate and captopril ratios, which were then cross-linked with calcium chloride. A study using Fourier-transform infrared spectroscopy demonstrates the compatibility of captopril with other excipients. Investigations were done into how the concentration of polymers affected the drug release profile. Response surface methodology was applied to systemically optimize the drug release profile. Polymer to drug ratio and stirring speed were selected as independent variables. Drug entrapment efficiency, percentage mucoadhesive and *in vitro* drug release were selected as dependent variables. Different evaluation criteria, including percentage yield, particle size analysis, drug entrapment efficiency, percentage mucoadhesive, invitro drug release, drug release kinetics, and scanning electron microscopy, were applied to the obtained microspheres. The optimized formulation (MM10) showed satisfactory drug entrapment efficiency percentage mucoadhesive and percentage drug release Scanning electron microscopy analysis revealed that particles were spherical with smooth surface. Better results were observed from optimized mucoadhesive microspheres of captopril, thereby improving the bioavailability due to prolong release of drug in stomach.

Key words: Response surface methodology; ionic gelation method; optimization; captopril.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU05

FABRICATION OF *BASELLA ALBA* SEED MUCILAGE-BASED MICROSPHERES FOR OCULAR DELIVERY OF KETOROLAC TROMETHAMINE: HET-CAM TEST

Vipul Sansare[1]*, Manish Kumar Gupta[2], Raghvendra Waghmode[3]

[1]*Department of Pharmaceutics, Indira Institute of Pharmacy, Sadavali, Maharashtra, India, 415804.*
[2]*School of Pharmaceutical Sciences, Jaipur National University, Jaipur, India, 302017.*
[3]*Department of Pharmaceutics, Krishna Institute of Pharmacy, Karad, Maharashtra, India, 415539.*

The present study was initiated with aim to fabricate ketorolac tromethamine loaded *Basella alba* seed mucilage based alginate microspheres for ocular drug delivery. The ionotropic gelation method was used for preparation of drug loaded microspheres. The formulated microspheres showed acceptable particle diameter and good stability as predicted from surface charge. The *Basella alba* mucilage-based microspheres revealed better swelling and mucoadhesive potential as well as slow drug release for 12 hours. In addition to this, the hen egg chorioallantoic membrane test revealed minimum irritation potential of formulation. Thus mucilage obtained from seeds *Basella alba* could be promising alternative for preparation of drug loaded microspheres.

Key words: Microspheres, Basella Alba, Ocular drug delivery, Mucoadhesive.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU06

FORMULATION AND EVALUTION OFNATURAL ANTI-ACNE CREAM

G. Nikhil*[1], Ms. Bhandari Jyothi[2]

B. Pharmacy IV year, St. Pauls college of pharmacy, Turkayamjal, Nagarjuna Sagar Road, 501510

Assistant professor, Department of Pharmaceutics, St. Pauls college of pharmacy, Turkayamjal, Nagarjuna Sagar Road, 501510.

Acne Vulgaris is a skin condition characterized by red pimples on the skin, especially on the face due to inflamed or infected sebaceous gland and prevalent chiefly among adolescents. Anti-Acne is a condition which prevents acne or to alleviate the symptoms of acne.In keeping with global statistic, approximately 85% of population willsuffer this skin issue at age around 12-25 years. Herbal cosmetic contains natural nutrients to boost and supply consumer satisfaction because of relatively fewer side effects compared to synthetic cosmetic. In this current study, Lemon Grass (Cymbopogon Citratus) is used and it acts as a natural toner, it shrinks pore size, tightens and firms the skin. It also has unique antifungal, antimicrobial, antibacterial and antiseptic properties that allow it to be an amazing astringent. Extraction method used for this procedure is Infusion. Evaluation tests performed are pH of the cream, spreadability, Homogeneity, appearance, Antimicrobial activity

Key words: Acne vulgaris, Anti-acne, lemon grass, Infusion,Antimicrobial.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU07

GEMCITABINE HYDROCHLORIDE LOADED NANOCOCHLEATE: FORMULATION, CHARACTERIZATION AND OPTIMIZATION USING DOE

Ms.Darshana Warekar, Dr.Nalini kurup*

Prin.K.M.Kundanai college of pharmacy, cuffe parade, colaba, Mumbai, Maharashtra, India.

The objective of the present work was to formulate gemcitabine hydrochloride loaded nanocochleates to obtain sustained release of gemcitabine hydrochloride. Gemcitabine hydrochloride nanocochleates were prepared by liposomes over trapping method. Ishikawa diagram was used as cause analysis tool to identify many possible causes affecting particle size and entrapment efficiency. The factors affecting the particle size were screened by Taguchi screening model. The significant factors affecting the particle size and entrapment efficiency were selected for optimization by central composite design. The results showed that maximum drug loading efficiency achieved was 86.6% with an average particle size of 39.8 nm and zetapotential of −24.3 mV. Scanning electron microscopy images confirmed the tubular structure of the formulation. Prepared nanochochleates were further characterized by IR, DSC, XRD. The nanocochleates were able to release gemcitabine hydrochloride slowly for longer period of time indicating slow release of drug. Gemcitabine hydrochloride release from nanocochleates was found to follow Korsmeyer-Peppas kinetic model with non-Fickian diffusion pattern. Thus, nanocochleates can be promising carrier for the anticancer drug gemcitabine hydrochloride.

Key words: Nanocochleates, optimization, particle size, SEM, IR, XRD, DSC, entrapment efficiency, Korsmeyer-Peppas kinetic model

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU08

FORMULATION AND EVALUATION OF GABAPENTIN MATRIX TABLETS

Dr.Kalepu Swathi*[1] , Dr.Mitta Chaitanya[1],Dr.Sneha Thakur[2]

Bojjam Narasimhulu Pharmacy College for Women, Saidabad, Hyderabad-50074

St. Pauls college of pharmacy, Turkayamjal, Hyderabad-501510

Epilepsy is a chronic neurological disorder generally characterized by recurrent unprovoked seizures. Hydrophilic polymer matrix is widely used for formulating an SR dosage form is attractive. The objective of the present study was to prepare and evaluation of Gabapentin matrix tablets to avoid the frequency of administration and to maintain the constant plasma concentration. The tablets were prepared using different viscosity grades of Sodium alginates such as Sodium alginate LF 5/60, Sodium alginate LF 10/60 and Sodium alginate LF 240D. Good physico chemical properties were observed in the prepared matrix tablets of Gabapentin. The physicochemical properties were within the Pharmacopoeia limit. In vitro release studies showed that the release rate decreased with increase in polymer concentration and viscosity of the polymer. The Matrix tablets containing Sodium alginate LF 5/60 was extended the drug release form 12-16 hours. The Matrix tablets containing Sodium alginate LF 10/60 was extended the drug release form 8-10 hours. The Matrix tablets containing Sodium alginate LF 240 D was extended the drug release form 9-13 hours. The data of dissolution was fitted to various kinetics models. The release form all the formulation followed first order with diffusion mechanism. Pappas n values suggest that the release was fickian diffusion. DSC and FTIR studies showed no drug polymer interaction.

Key words: Gabapentin, Matrix tablets, Epilepsy, Antiepileptic drugs

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU09

DEVELOPMENT CHARACTERIZATION AND PHARMACOKINETIC EVALUATION OF OPTIMIZED VILDAGLIPTIN SUSTAINED RELEASE MATRIX TABLET USING BOX-BEHNKEN DESIGN

[1]Sanjay Kumar Gupta*, [2]Dr. Sradhanjali Patra

[1]Research Scholar,[2]University Department of Pharmaceutical Sciences, Utkal University, Bhubaneswar, Odisha

[2]University Department of Pharmaceutical Sciences, Utkal University, Bhubaneswar, Odisha

Objective: The principal objective of this research was to develop optimize cost effective sustained release Vildagliptin (VLN)tablets using wet granulation method.

Methods: The tablets were prepared by non-aqueous wet granulation method. Box–Behnken design was used to study the effect of the independent variables i.e. HPMC K100 M, Eudragit RSPO and PVP K30 on dependent variables swelling index , in vitro drug release at 8hr and 12hr. The drug's physiochemical properties were investigated using ultraviolet (UV), fourier transform infrared (FTIR) and differential scanning calorimetry (DSC). The hardness, thickness, weight variation, content uniformity, swelling index, and in vitro drug release study of the formulated tablets were all evaluated. The optimized formulation Opt-VLD-SR was evaluated for pharmacokinetic parameter like AUC, C_{max} and MRT

Results: The FTIR & DSC studies confirmed that no interaction occurred between the drug, polymers, and excipients. The crystalline nature of VLN remained unchanged in the optimized formulation tablet, according to DSC studies. With the optimal concentration of both polymers, formulation Opt-VLN delayed drug release for up to 12 hours. The formulated Optimized Sustained release tablets (Opt-VLD-SR) showed significantly lower Cmax(184 ±3.01ng/ml) than conventional IR tablet (256.17 ±8.02ng/ml)

Conclusion: Sustained release tablets of VLN with a combination of diffusion & erosion controlled drug release mechanism have been developed successfully.

Key words: Sustained release, Vildagliptin, Eudragit RSPO, HPMC K100 M.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU10

DESIGN AND EVALUATION OF *ACACIA CONCINNA* AND *SAPINDUS MUKOROSSI* COLOADED DENTURE CLEANSER PASTE: ASSESSMENT OF ANTIMICROBIAL POTENTIAL IN PRE-USED DENTURES

Gaurav Bhave[1], Vipul Sansare[1], Gauri Rahate[2], Prashant Gurav[1]

[1] *Department of Pharmaceutics, Indira Institute of Pharmacy, Sadavali, Devrukh, India, 415804.*

[2] *Department of Pharmaceutics, Govindrao Nikam College of Pharmacy, Sawarde, Chiplun, India, 415606.*

The present study was started with aim to formulate *Acacia concinna* and *Sapindus mukorossi* coloaded denture cleanser paste and evaluation of its effectiveness in pre-used dentures. The denture cleanser paste containing both powders was formulated and evaluated for cleaning potential, foamability and antimicrobial potential against *Staphylococcus aureus* and *Escherichia coli.* All batches of formulated paste showed good cleaning potential as revealed from removal of stains induced by permanent markers, highlighter and picric acid on eggshell. In addition to this, paste showed acceptable antibacterial potential against both microbial strains as well as in pre-used dentures. However, *in-vivo* studies are necessary to predict the effectiveness of formulated paste. Thus, formulated herbal denture cleanser could be viable alternative to commercially available denture cleansers.

Key words: Acacia concinna, Sapindus mukorossi, Antimicrobial, Herbal denture cleanser.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU11

ADVANCEMENTS IN NANOTECHNOLOGY TO ACCELERATE WOUND HEALING

Daniya Khan*

Sultan-Ul-Uloom College of Pharmacy, Mount Pleasant, 8-2, 249 to 267, Road Number 3, Banjara Hills, Hyderabad, Telangana, India.

Wound healing is a complex process that is critical in repairing the skin barrier. Each type of wound has its own healing requirements. One of the most common complications associated with wounds is infection. There are numerous diseases that can interfere with the healing process of wounds resulting in chronic wounds that can be a major health concern. An ideal wound dressing should promote faster healing of the wound with minimal time and cost expenditures. Nanotechnology is being used to address problems related to wound repair mechanisms. Nanoparticles promote diabetic wound healing by loading bioactive molecules and non-bioactive substances. In addition, nanoparticles can be combined with technologies such as 3D-printing to treat chronic wounds. Nanoparticles have the ability to deliver a sustained and controlled release of drugs which ultimately accelerates the healing process. Metal nanoparticles such as silver, gold and zinc are being used to promote wound healing and to prevent bacterial infections. Several medical devices, such as wound dressings, wearable wound monitors and negative pressure wound therapy devices have been developed to improve the chronic wound environment. There are many complications during the process of wound healing which can be overcome by developing current technologies. We must lay the foundation for future wound care by selecting suitable nanoparticles, bioactive compounds and wound dressings that can enhance and facilitate wound healing. Future studies need to be performed to discover new products and advance the wound healing field.

Key words: Wound dressings, Wound healing, Nanotechnology, Nanoparticles, Infection, Bioactive compounds.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU12

DEVELOPMENT OF METHOTREXATE- LOADED NANOCOCHLEATES BY TRAPPING METHOD FOR TREATMENT OF BREAST CANCER

Nikhil Rajnani*, Dr. Nalini Kurup

Prin.K.M.Kundnani College of Pharmacy, Cuffe Parade, Mumbai - 400005.

The most frequent cancer in women and the one with the greatest fatality rate is breast cancer. Although several medications are available to fight against breast cancer, but methotrexate remains one of the prime choice because of its economic value. However, because of toxic effects of methotrexate, an efficient methotrexate formulation with controlled release is urgently needed at this point, since it would represent a substantial advancement in the fight against cancer. The goal of this study was to use the nanocochleates drug delivery system as a carrier for formulation techniques, minimize the dose of methotrexate, and assess it through an in-vitro breast cancer cell line MCF-7 investigation. Methotrexate-loaded nanocochleates (NC) were prepared by trapping method. The optimized methotrexate-loaded NC were evaluated for size, shape, entrapment efficiency, in vitro methotrexate release, cytotoxicity study. Optimized NC under optimized conditions showed particle size and zeta potential of 199nm and -12.9mv respectively, high entrapment efficiency 75%, drug loading of 37.5% and drug content 99%. NC demonstrated sustained release of methotrexate at physiological pH. In-vitro anticancer activity against human breast cancer MCF-7 cells was tested. Growth of inhibition 35.6% was observed for methotrexate loaded NC at a concentration 80 µg/ml, for methotrexate loaded Liposome it was -20.8% at concentration 80 µg/ml? Thus methotrexate formulated as nanocochleates had better anti-proliferative activity than liposomes of methotrexate on MCF-7 breast cancer cell line.

Key words: Methotrexate, Nanocochleates, Trapping Method, Breast Cancer.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU13

PREPARATION AND EVALUATION OF PLGA LOADED LAPATINIB NANO PARTICLE

Somasundaram I , Sree Lakshmi K, Jeganath.S

School of Pharmaceutical Sciences, Velsinstuite of science, technology and advance studies (VISTAS), Pallavaram, Chennai - 600117, Tamil Nadu, India.

Nanoparticles are microscopic particles with few nanometers wide cavities, in which a large variety of substances can be encapsulated. Drugs encapsulated within the nanoparticle pores are shielded from premature destruction and stability of drug is enhanced. Main objective of this study was to formulate Lapatinib loaded nanoparticles using PLGA polymer to improve the bio-availability.Preformulation studies were carried out in that the comparison of FTIR spectra of Lapatinib and mixture of Lapatinib with polymer confirms that there is no appearance of additional new peaks and disappearance of existing peaks from that of the drug. This indicates that there is no interaction between the drug and polymer used in the study.Scanning electron micrograph of the prepared nanoparticles at different magnification showed that the nanoparticles were with a smooth surface morphology and spherical shape. The particle size analysis confirmed that the prepared sample were in the nanometer range. Average particle size obtained for the formulations was between 178nm and 746 nm. Zeta potential values of nanoparticles indicated that the formulated nanoparticles are stable. The amount of drug being entrapped in nanoparticles was calculated and all the prepared nanoparticles were found to possess very high entrapment efficiency LPN 3 of 88% . In-vitro release profile of 8LPN 3 formulation showed 93.4% of drug release on 24 hours. Thus effectively improve the transport of lapatinib across BBB and thereby increasing the bioavailability in brain.

Key words- Lapatinib ,PLGA, sodium lauryl sulphate, Nanoparticles, Nanoprecipitation process.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU14

DESIGN AND EVALUATION OF TOPICAL GEL CONTAINING SOLID-LIPID NANOPARTICLES LOADED WITH LULICONAZOLE

Jhansi Yallavula*, Kiranmai Madava, B. Deepika

Department of Pharmaceutics, St. Pauls College of Pharmacy, Turkayamjal, Ranga Reddy.

New topical pharmaceutical options are critically needed for the treatment of fungal infections for prolonged therapeutic action. Luliconazole is a topical antifungal medicine for the treatment of fungal infection but bioavailability barriers of luliconazole approached to develop effective topical luliconazole solid lipid nanoparticles (SLN) gel formulation with prolonged therapeutic potential against tropical fungal infection.SLN of luliconazole was prepared by the solvent diffusion method using stearic acid & poloxamer 188. The preformulation studies were conducted for the authenticity of the leading moiety. Thereafter, the prepared SLN followed by gel formulations were subjected to physicochemical evaluation, *in-vitro* release profile of drug with kinetics studies. Thereafter, FTIR spectroscopy and scanning electron microscopy of the optimized formulation was done successfully. The results reveal that SLN F6 shows a significant entrapment efficacy with the highest entrapment of 92.13%±0.975. In particle size, size distribution and zeta potential analysis, SLN exhibit a mean particle diameter of ~344.3 nm, with unimodal size distribution, a polydispersity index of 0.168, intercept value 0.98 with 92% peak intensity and zeta potential ~18.8 mV. Further, G3 gel with 1.5 % Carbopol 934 w/v showed a higher entrapment efficacy with 91.39%±0.187, a sustained release profile with 79.57%±0.213 of the drug release even after 24 hrs as compared to other formulation. It is concluded that the Luliconazole loaded SLN based gel formulation containing Carbopol 934 1.5% w/v is suitable for topical application and may show a much better result of anti-fungal activity.

Key words: Solid lipid nanoparticles loaded Gel, Drug Content, pH of the Gel, In-vitro drug release.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU15

FORMULATION AND EVALUATION OF VALCYCLOVIR NIOSOMES

Matta Aruna

School of Pharmaceutical Sciences, Vels Institute of Science, Technology and Advanced Studies (VISTAS), Pallavaram, Chennai-600117,Tamil Nadu,India

The current study intends to create and assess valacyclovir niosomes by using Box-Behnken Design. By employing the non-ionic surfactant Brij 72, the charge inducer diacetylphosphate, and cholesterol, stable valacyclovir-loaded niosomes can be created. To study andoptimise the primary effects, interaction effects, and quadratic effects of the formulation ingredients on the functionality of the niosomes, a total of 17 formulations with the mentioned oncentrations were produced using a three-factor, three-level Box-Behnken design. Initial Preformulation and drug excipient compatibility investigations were conducted, and the findings guided the formulation process moving forward. The majority of vesicles have spherical shapes, and their sizes fall within a certain range. The vesicles created by the thin film hydration approach can contain a significant amount of valacyclovir (72–86%). The concentration of non-ionic surfactants and charge inducers may have an impact on how drugs are released from all formulations. Comparing the in vitro release of valacyclovir from niosomes to that from a pure valacyclovir solution, the in vitro release was extremely slow and sustained a prolonged release. The niosomal formulation was stable, according to drug release experiments. In all formulations, drug release was almost constant, indicating a zero order release pattern.

Keywords: Valacyclovir, Niosome, Thin Film Hydration Technique.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU16

FORMULATION DEVELOPMENT AND EVALUATION OF TOPICAL CREAM USING SHATA DHAUTA GHRITA AS CREAM BASE.

Madhuri D. Deshmukh*, Moreshwar P. Patil

Department of Pharmaceutics, MET Institute of Pharmacy Adgaon Nashik, Affiliated to Savitribai Phule, Pune university, Adgaon Nashik MH,422003, India

Ayurveda since ancient times, the science of health care and medicine has been regarded as extremely important. *Ghrita* is one among the *chaturvidha sneha* explained in Ayurveda and widely used as *Ahara* and *Aoushada*. *Shatadhauta ghrita* (SDG) is an example of *Dhouta samskara* and one such unique preparation. SDG (*shata* -100 times, *dhauta* - washed) is made by washing cow ghee along with water 100 times. This method turns ghee into a soft, cooling, nourishing, silky cream. *Shatadhauta Ghrita* was prepared using cow's ghee as per standard Ayurvedic classical texts and subjected to study organoleptic properties (color-white, odor- odorless taste- tasteless texture-Smooth oily and homogenous , weight-increased 50 gm to 75 gm), chemical properties (acid value-0.097±0.001, Iodine value-2.54±0.027, Saponification value-24.98±0.078, and Copper content-1.19±0.0035 ppm , RM value-0.22±0.0057, P value-0.116±0.0088), physical properties (Moisture content-0.86±0.028, pH-5.86±0.033, Particle size-59.29±0.648, Viscosity (cp) at 20rpm for 30 seconds-9771±0.57, Type of emulsion-O/W) analyses as per the standard pharmacopeial procedures. The main objective of the research work was to prepare and evaluate cream by using SDG as a base and Characterization SDG base was compared with synthetic base by loading Phytoconstituent. The stability study was done as per the ICH guideline. In-vitro drug release study was performed in a phosphate buffer of pH 6.8 using a Franz diffusion cell apparatus and it was shows maximum drug release 96.30% over a period of 3hr.The formulation did not show acute skin irritancy.

Key word: Shatadhauta Ghrita, Ayurveda, Cow ghee, Samskara, Ahara, Aoushada.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU17

DESIGN DEVELOPMENT AND *IN-VITRO* EVALUATION OF SUSTAINED RELEASE ZOLMITRIPTAN TABLET AN ANTI MIGRAINE DRUG BY USING POLYMERS.

Mr. Gowri Sankar Chintapalli [1*,2], Dr. Durgaprasad Kemisetti[1], Dr. Kirtimaya Mishra[2]

[1*,2] *PhD Scholar, Faculty of Pharmaceutical Sciences, Assam down town University, Guwahati, Assam.*

[1] *Faculty of Pharmaceutical Sciences, Assam down town University, Guwahati, Assam.*

[2] *School of Pharmacy, ARKA JAIN University, Jamshedpur, Jharkhand.*

Zolmitriptan is an anti-migraine medication with a half-life of 3 hours. The purpose of this study was to develop a sustained release dosage form of Zolmitriptan via direct compression using various percentages and grades of release rate controlling polymers such as Ethylcellulose, Sodium alginate, and Sodium carboxy methyl cellulose (10%,15%, and 20%, respectively). Density, thickness, hardness, friability, disintegration time, wetting time, and in-vitro dissolution time were all measured in the tablets. Every parameter was found to be within acceptable limits. The invitro release pattern of the final formulation was compared to that of the innovator. The current study focused on the development of sustained release matrix tablets, which were intended to extend the duration of action following oral administration. As a result, we conclude that, when compared to other formulations, F7 formulation controls drug release for a longer period of time than the others.

Key words: Triptan derivatives, Sodium alginate, Ethyl cellulose, Direct compression method.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU18

A COMPARATIVE STUDY ONBINDING EFFICACY OF NATURAL PLANT BASED EXCIPIENT IN THE FORMULATION OF ORAL IBUPROFEN TABLET

G J Vaishnavee*

Quality Analyst, Terumo Penpol Private Limited, Thiruvananthpuram, Kerala

Oral drug delivery is the most preferred route of drug administration because of its administration ease, formulation stability and enhanced patient compliance. The tremendous orientation of pharma world towards the use of naturally derived polymers such as gum and mucilage has become an increasing, due to their abundance in nature, safety and economy. In the present study, an attempt was made to know the binding efficacy of an emerging natural binder *Vigna mungo seed* gum (VMSG). Ibuprofen was chosen as the model drug for the formulation, and a reference batch of starch and PVP K30 was also prepared to carry out the comparative study to assess the binding nature. The *Vigna mungo* seed gum was prepared and exposed to various characterization studies. The compatibility of drug and the excipients was studied by FT-IR spectroscopic analysis. Seven formulations were prepared by wet granulation technique and were subjected to both pre-compression and post-compression parameters. Based on the results obtained the optimized formulation was selected and compared with the reference batch. A comparative study was performed to determine the pattern of drug release using various mathematical models. Based on the regression coefficient and release exponents 'n' values, it was concluded that the mechanism of drug release of the formulation strictly follows first order kinetics with Fickian release. From the observation of various evaluation parameters, the result shows that F4 formulation (10% VMSG) exhibits better values than PVP K30 and similar value to that of starch. Hence VMSG can be a promising alternative binding agent in drug delivery system andfuture studies can be undertaken to study its potential use as a multifunctional excipient

Key words: Oral drug delivery; Binding efficacy; Natural binder; Ibuprofen; Wet granulation method; *Vigna mungo Seed gum; Starch; PVP K30.*

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU19

DESIGN AND DEVELOPMENT OF LANSOPRAZOLE NANOSUSPENSION WITH ITS OPTIMIZATION FOR THE ENHANCEMENT OF SOLUBILITY AND *IN VITRO* DISSOLUTION.

Lalita S Nemade[1*], Dr. Moreshwar P Patil[2].

[1] *MET's Institute of Pharmacy, Adgaon Nashik, Maharashtra. 422003*

[2] *Associate Professor, MET's Institute of Pharmacy, Adgaon Nashik, Maharashtra 422003*

Lansoprazole is mainly used for gastroesophageal-reflux- disease (GORD) (BCS class II) with poor solubility and high permeability. In the present work we have investigated the enhancement of solubility and in vitro dissolution by preparing nanosuspension. Lansoprazole nanosuspension was tried with various stabilizers like PVP K 30, poloxamer, HPMC and PVA for their compatibility by FTIR and DSC study. PVP K30 showed the better compatibility and thus used in formulation. Nanosuspensions was prepared by selecting PVP K 30, methanol as stabilizer, solvent and cryoprotectant respectively by nanopure technique followed by freeze-drying (lyophilization). By considering concentration of stabilizer, conc of mannitol and secondary drying as process parameters were used for optimization by Box-Behnken Design (Quadratic model). Drug content and moisture content were recorded as response first and response second respectively for screening of optimized formulation. The optimized formulation was characterized for its particle size and its distribution, surface morphology characteristics, zeta potential, in vitro dissolution study and its solubility. And it was observed that approx. 8-fold increase in the solubility with doubles the *in vitro* dissolution rate as compared to pure drug.

Key words: Nanosuspension, solubility, In vitro dissolution, Nanopure, lyophilization, Box-Behnken Design.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU20

OPTIMIZATION OF STARCH HYALURONATE AS A NEW SUPERDISINTEGRANT IN THE FORMULATION OF FAST DISSOLVING TABLETS OF BCS CLASS II ANTIHYPERTENSIVE AGENTS

Anusha Kusuma*, Santosh Kumar Rada

Department of pharmaceutics and GITAM School of Pharmacy, GITAM (Deemed to be University), Rushikonda, Visakhapatnam, Andhra Pradesh - 530045, India.

The current examination includes in the assessment of novel superdisintegrant like superdisintegrant in the plan of fast dissolving medication of badly dissolved active medicament. Antihypertensive medications are supposed to giveaccelerated behavior and higher systemic availability. Current research, nisoldipine FDTs have been figured out by a direct compression method utilizing a mix of starch hyaluronate as novel superdisintegrant, crospovidone and SSG and optimized for superdisintegrant dosage efficiency to accomplish quick breaking down of the tablets in the oral cavity. The central composite design (CCD)used to examine the impact of starch hyaluronate (A), crospovidone (B), and sodium starch glycolate (C) amounts on dependent parameters like disintegration time, total % release of drug, and dissolution efficiency. 27 compostions planned as per Central composite design, analyzed for physical and chemical characteristics, different quality measurements, and studies of dissolution. This was stated that Crospovidone, SSG, and starch hyaluronate each make about 5% of the formula has a proper potential for application in the formulation of rapidly disintegrating tablets, in addition to improves clinical obedience throughout the efficacious treatment of hypertension.

Key words: Nisoldipine, Central composite design, Drug release, Superdisintegrant, Antihypertensive.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU21

DEVELOPMENT AND OPTIMISATION OF MOUTH DISSOLVINGTABLETS OF KETOCONAZOLE USING SUPERDISINTIGRANTS

Sarad Pawar Naik Bukke*[1], Hussaini Bello[1], Shaik Gousiya[2], A Sai Sindhu[2],Purushotham Reddy K[3], Narayana Goruntla[3]

[1]*Department of Pharmaceutics and Pharmaceutical Technology, Kampala InternationalUniversity, Western Campus, Uganda*

[2]*Department of Pharmaceutics, Rao's College of Pharmacy, Nellore, Andhra Pradesh, India* [3]*Department of Clinical Pharmacy and Pharmacy Practice, Kampala International University, Western Campus, Uganda.*

Recent advances in Novel Drug Delivery System (NDDS) aim for designing forms, convenient to be manufactured and administered free side effects, offering immediate release and enhanced bioavailability. So as to achieve better patient compliance, mouth dissolving tablet is one of such delivery system. Ketoconazole was used the treatment of oral thrushes and systemic infections. A Fast-dissolving tablet (FDT) is a solid dosage form that contains medicinal substances and disintegrates rapidly (within seconds) without water when placed on the tongue. The drug is released, dissolved or dispersed in the saliva and then swallowed and absorbed across the GIT. New generation Hydrotropic agents Benzoic acid, Urea and Caffeine was selected as Hydrotropic agents. All the formulations were prepared by direct compression method using 9mm punch on 10 station rotary tablet punching machine. Among all the formulations F9 formulation showed maximum % drug release i.e., 99.36% in 8 min hence it is considered as optimized formulation and it contains Caffeine as Hydrotropic agent.

Key words: Ketoconazole, Mouth dissolving, Hydrotropic agents, Benzoic acid, Urea and Caffeine.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU22

PREPARATION, CHARACTERIZATION AND EVALUATION OF CELECOXIB LOADED NANOSPONGES FOR THE TREATMENT OF PSORIATIC ARTHRITIS

P. Subhash Chandra Bose

MNR College of Pharmacy, Sangareddy.

Psoriatic arthritis is a chronic inflammatory joint disease which is one of the types of psoriasis. 25% of all psoriasis patients develop psoriatic arthritis. It is characterised with innate and adaptive immune responses. The main objective of the present work was to prepare characterization and evaluate the Celecoxib nanosponges for the treatment of Psoriatic Arthritis. It is a non-steroidal anti-inflammatory drug (NSAID) having low solubility and low bioavailability. In order to increase the solubility, this drug was incorporate in nanosponges by melting technique. The prepared formulation was evaluated for different parameters. SEM images confirm that the prepared formulation was spherical and porous in nature. Particle size analysis shows that as the cross-linker ratio increases, there is increase in the particle size of nanosponges. Particle size was in the size range of 201.69 nm. The in vitro studies were carried out for prepared nanosponges which showed drug release of 89.69% in 24 h.

Key words: Nanosponges, Psoriatic arthritis, NSAID, Drug release

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU23

FORMULATION AND EVALUATION OF ALOE VERA EXTRACT TABLETS

S.N.V.L Sirisha [1] *, B.Hema 1 , Gunnam Sailaja [2] , Lakshmi Santha M [3] , CH K V L S N Anjana Male [3]

1 Malla reddy college of Pharmacy, Telangana.
2 Gokaraju Rangaraju college of Pharmacy, Telangana.
3 Nirmala college of pharmacy, Atmakuru, Mangalagiri.

Since the beginning of time, people have employed natural remedies made from plants, animals, microbes and marine organisms to delicacy and avert disease. Aloe vera, (*Aloe barbadensis* Family:*Liliaceae*) also known as the Medicinal Aloe, is a species of succulent plant that probably originated in northern Africa. It grows mainly in the dry regions of Africa, Asia, Europe and America. In India, it is found in Rajasthan, Andhra Pradesh, Gujarat, Maharashtra and Tamil Nadu, Direct compression is the simplest and most economical method for the manufacturing of tablets using Aloe vera powder. Metformin HCl formulation was found to be incompliance with all the properties of powders and exhibit satisfactory results. From the carried out study, it can be concluded that the formulation of Metformin HCl tablets by using *Aloe-Vera* powder was prepared well and had all the required necessary properties.

Key words: Aloe vera extract, Metformin tablets, direct compression method.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU24

DESIGN FORMULATION AND EVALUATION OF ANTI MIGRAINE MOUTH DISSOLVING TABLETS USING DIFFERENT SUPERDISINTEGRANTS

Md.Mohuddin[1*] Dr. Pawan kumar[2], Dr. Syed Areefulla Hussainy[3]

[1*]*Research scholar, Singhania University, Rajasthan, India*
[2]*Associate Professor, Singhania University, Rajasthan, India*
[3]*Professor, Mesco College of Pharmacy, Telangana, India*

The oral route is the most convenient route of administration. The novel type of dosage form is mostly preferred by the patients over the conventional dosage form. Therefore, mouth dissolving tablets were introduced to serve the purpose for those patients especially facing the problem of dysphagia and also patients travelling with no access to water, the mouth dissolving tablets has neither to be swallowed nor require water as they dissolve rapidly in the saliva within few seconds of administration. The conventional tablets take more time to elicit its action than the mouth dissolving tablets. The acute migraine can be relieved instantly by the mouth dissolving tablets. Therefore, the anti-migraine mouth dissolving tablets are prepared using superdisintegrants in different proportions by direct compression and wet granulation methods. The prepared tablets are evaluated for various parameters to ascertain the desired characteristics.

Key words: Migraine, Mouth dissolving tablets, Superdisintegrants, Direct compression method, Wet granulation method.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU25

NANOSTRUCTURED LIPID CARRIERS: A PIONEERING APPROACH FOR BIOAVAILABILITY ENHANCEMENT

P.Naga Haritha*, K. Janakiraman[1], K. Venu Madhav[2]

[*] *Research Scholar, Department of Pharmacy, Annamalai University, Chidambaram, Tamilnadu*

[1] *Head & Professor, Department of Pharmacy, Annamalai University, Chidambaram, Tamilnadu*

[2] *Head & Professor, Department of Pharmaceutics, St Pauls College of Pharmacy, Hyderabad*

Nanostructured lipid carriers (NLCs) are novel pharmaceutical formulations which are composed of physiological and biocompatible lipids, surfactants and co-surfactants. Over time, as a second generation lipid nanocarrier NLC has emerged as an alternative to first generation nanoparticles. This review article highlights the structure, composition, various formulation methodologies, and characterization of NLCs which are prerequisites in formulating a stable drug delivery system. NLCs hold an eminent potential in pharmaceuticals and cosmetics market because of extensive beneficial effects like skin hydration, occlusion, enhanced bioavailability, and skin targeting. This article aims to evoke an interest in the current state of art NLC by discussing their promising assistance in enhancing bioavailablity. The key attributes of NLC that make them a promising drug delivery system are ease of preparation, biocompatibility, the feasibility of scale up, non-toxicity, improved drug loading, and stability.

Key words: Nanostructured Lipid carriers, bioavailability enhancement, BCS class IV drugs, stability, drug loading.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU26

DESIGN AND DEVELOPMENT OF IVABRADINE HYDROCHLORIDE CHRONOPHARMACOLOGICAL DRUG DELIVERY

Kirti Ranjan Parida, Priti Talwar*

**Apoptosis and Cell Survival Research Laboratory, 412G Pearl Research Park, School of Biosciences and Technology, Vellore Institute of Technology, Vellore 632014, Tamil Nadu, India.*

Creating a mechanism for Ivabradine HCl chronopharmaceutical drug delivery to the colon was the aim of the current work.A time-delayed capsule was created by encapsulating the microparticles inside a gelatin capsule comprised of an erodible hydrogel plug. The microparticles were created using a technique called counter-ion induced aggregation. sodium citrate, sodium sulphate, and sodium tripolyphosphate, which have smaller molecules, were selected as poly-anions, and natural polymers like chitosan were chosen as polycations. The surface shape, particle size distribution, in-vitro un-harness, and interplay between drug excipients of the synthesised aggregate microparticles were examined. Based on dissolving tests, optimised microparticle formulations were carefully selected. A hydrogel plug was inserted into the capsule opening and the whole thing had an enteric coating. The pulsatile-capsule was demonstrated to have the ability to delay the drug's release in the fluid of the small intestine and also eject the plug in the fluid of the colon, releasing the microparticles into colonic fluid after a delay of five hours.To simulate the pH fluctuations along the GI tract, three dissolving medium with pH-1.2, 6.8, and 7.4 were used in succession. There was no drug-polymer interaction, according to an FT-IR analysis. Ivabradine HCl produced with sodium tripolyphosphate demonstrated extended release for a duration of 12 hours across all formulations.The results demonstrate that the device can prevent a rapid rise in the blood pressure in the early morning, whenever the risk of a heart attack is greatest, and delay the release of a medication for a programmable time period.

Key words: Ivabradine HCl; Pulsatile; Microparticles; counter-ion elicited aggregation.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU27

DESIGN AND EVALUATION OF VILDAGLIPTIN MATRIX TABLETS BY RESPONSE SURFACE METHODOLOGY

Deepika B*, K. Sujatha

Faculty of Pharmacy, SRIHER, Porur, Chennai- 600116

Currently, the use of plant based natural gums and mucilage are increased in manufacturing of pharmaceutical dosage forms as retarding polymers and excipients, because these natural plant-based materials are biocompatible, biodegradable, free of side effects and economic. Therefore, in the present research work, eight different formulations of Vildagliptin matrix tablets were designed to study the effect of three independent factors like amount of HRLM (X1), amount of ZP (X2) and amount of TSP (X3) on drug release characteristics. Each factor was studied at two levels designated as -1 (60 mg; 15%w/w) and +1 (80 mg; 20%w/w).The prepared matrix tablets were evaluated for pre-compression and post compression parameters. A reduced drug release had been noticed with increased polymer quantity & the more impact was shown by TSP followed by HRLM and ZP. Maximum drug release (93.63±2.66%) has been noticed from V1 formulation because of having a composition of three polymers each at lower level (60 mg). The drug release from V8 formulation was minimum (74.35±1.87%) due to more swelling and matrix formation by three retardant polymers each at higher level (80 mg). The obtained in-vitro drug release data (cumulative % drug release after 24 hours) of eight formulations was subjected to ANOVA test using DOE software to identify significant terms (with $p<0.05$) used in multiple regression equation. The selected modified model used in software for ANOVA testing was proved to be significant ($p<0.05$).

Key words: Vildagliptin, Tamarind seed polysaccharide, zein powder, matrix tablets and sustained release.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU28

CENTRIFUGAL MELT SPUN MICRO-FIBROUS SOLID DISPERSION FOR SOLUBILITY ENHANCEMENT OF POORLY SOLUBLE DRUG

Priya Rodge

Department of Pharmaceutics, Dr. D.Y. Patil Institute of Pharmaceutical Sciences & Research, Pimpri, Pune – 411018, India.

Low dissolution rates of poorly soluble drugs is the factor affecting their bioavailability Centrifugal melt spinning method is a simple economical and scalable technique to prepare microfibers with enhanced solubility and dissolution rate. The aim of this study was to enhance the dissolution rate of poorly soluble drug, Diclofenac sodium by centrifugal melt spinning technique. Micro- fibrous solid dispersions of Diclofenac sodium 10% w/w with sucrose were prepared by using a cotton candy machine. The dissolution studies revealed that the drug-loaded microfibers released 98.10±0.52 % of drug within 5 minutes as compared with pure drug and physical mixture. Scanning electron microscopy results revealed that bead-free drug-loaded microfibers with homogenous morphology and diameter in the range of 13.25 µm were prepared. Differential scanning calorimetric and X-ray diffraction analyses showed that both drug and carrier were present in the amorphous state in the microfibers. The results indicated that the centrifugal melt spinning rapidly produced fast dissolving microfibers. This study has demonstrated that centrifugal melt spinning process could offer a simple potentially scalable and flexible manufacturing process to improve the dissolution rate of poorly soluble drugs.

Key words: poorly soluble drug, micro-fibrous solid dispersion, centrifugal melt spinning, enhanced solubility.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU29

SYNTHESIS, CHARACTERIZATION AND EVALUATION OF CARDIOPROTECTIVE ACTIVITY OF SILVER NANOPARTICLES USING *TERMINALIA ARJUNA* LINN BARK EXTRACT

Ruchira Salunkhe*, Swati Patil

**Department of Pharmacognosy, Prin. K. M. Kundnani College of Pharmacy, Cuffe Parade, Mumbai, Maharashtra, India.*

Terminalia arjuna Linn, a traditional Indian drug is well known for cardioprotective activity. A major challenge while using phytoconstituents is their poor bioavailability and patient non-compliance. This can be overcome by designing NDDS for effective therapeutics using herbal drugs. The present study was aimed to synthesize, characterize and evaluate cardioprotective effect of silver nanoparticles (AgNPs) using aqueous bark extract of *Terminalia arjuna* Linn as green reducing and capping agents. Formation of stable AgNPs were achieved by mixing extract with 1mM silver nitrate solution. The spectral studies revealed, formation of polydispersed spherical AgNPs with an average size ranged between 30 to 50nm. Characteristic surface plasmon band at 440nm, confirms synthesis of AgNPs. The EDAX and ICP-AES analysis also confirmed presence of silver in the solution.

Furthermore, cardioprotective activity of synthesized AgNPs was analyzed using CAM assay, revealed increase in number of branching vessels of chicken choriallontoic membrane (62±4.24) as compared to the plain extract (33±2.82) indicating the pro angiogenic activity of *Terminalia arjuna* mediated AgNPs. Toxicity studies were carried out using Tryphan blue exclusion method on H9C2 cell line showed no toxicity upon incubation for 24hrs and exhibited more than 90% of the cell viability values.

The concept of using nanometal particle is prevailing since *Charaka Samhita*. Taking inspiration from the fact that nanoparticles enhances bioavailability, the above experimental data of herbal based metal nanomedicine can give a scientific background. This would help in utilizing the age-old wisdom of Ayurveda for the development of newer drugs in modern medicine.

Keywords: Terminalia arjuna Linn, Cardioprotective, pro angiogenesis, herbal silver-nanoparticles.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU30

RESEARCH ON PREPARATION OF FAST DISINTEGRATING ORAL METOPROLOL TABLET

Yusra Fathima*

Sultan-Ul-Uloom College of Pharmacy, Hyderabad

The oral type of drug administration is the most common and preferred route of administration and among them, tablets are the most widely used and have greater patient compliance. However, pediatrics, geriatrics, and mentally ill patients experience difficulty in swallowing conventional tablets, and to overcome this problem researchers have developed an innovative drug delivery system. This type of delivery system is known as fast disintegrating tablets (FDT). This type of tablet disintegrates in the oral cavity in minutes in presence of saliva without chewing or consuming water. FDTs are solid unit dosage forms composed of super disintegrants such as mannitol, aspartame, magnesium stearate, and lactose combinations. Due to super disintegrants, the drug gets dissolved quickly, resulting in rapid absorption of the drug in turn the rapid onset of action. Metoprolol is commonly used alone or in combination with other drugs for hypertension, and angina pectoris. The formulation of metoprolol fast-dissolving tablets was prepared by use of the direct compression method and pre-compression tests and post-compression tests were conducted.

Key words:- fast disintegrating tablet, super disintegrants, metoprolol, direct compression, natural super disintegrants, Fourier transform infrared spectroscopy.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU31

FABRICATION OF *BASELLAALBA*SEED MUCILAGE-BASED MICROSPHERES FOR OCULAR DELIVERY OF KETOROLAC TROMETHAMINE: HET-CAM TEST

Vipul Sansare[1]*, Manish Kumar Gupta[2], Raghvendra Waghmode[3]

[1]*Department of Pharmaceutics, Indira Institute of Pharmacy, Sadavali, Maharashtra, India, 415804.*
[2]*School of Pharmaceutical Sciences, Jaipur National University, Jaipur, India, 302017.*
[3]*Department of Pharmaceutics, Krishna Institute of Pharmacy, Karad, Maharashtra, India, 415539.*

The present study was initiated with aim to fabricate ketorolac tromethamine loaded *Basellaalba* seed mucilage based alginate microspheres for ocular drug delivery. The ionotropic gelation method was used for preparation of drug loaded microspheres. The formulated microspheres showed acceptable particle diameter and good stability as predicted from surface charge. The *Basellaalba* mucilage based microspheres revealed better swelling and mucoadhesive potential as well as slow drug release for 12 hours. In addition to this, the hen egg chorioallantoic membrane test revealed minimum irritation potential of formulation. Thus mucilage obtained from seeds *Basellaalba* could be promising alternative for preparation of drug loaded microspheres.

Key words: Mucilage, Ketorolac, Microspheres.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCEU32

ARTIFICIAL INTELLIGENCE IN PHARMACEUTICAL INDUSTRY

SAMARU

Department Of Pharmaceutics, Yenepoya Pharmacy College and Research Centre Yenepoya (Deemed to be university), Mangalore, Karnataka, India

Artificial intelligence [AI] is a branch of computer science that deals with the problem solving by the aid of symbolic programming. Artificial intelligence is pharma's next frontier in life science. The advancement of computing and technology has invaded all the dimensions of science. Artificialintelligence is been considered fourth industrial revolution machine. The health care and pharmaceutical industries have long been early adopters of technological development reaping major benefits as a result. Artificial intelligence has found its way for application in the field of medicinal chemistry and health care. In recent times the ai technology has replaced the conventional method of drug design. The use of these modern techniques has revolutionized the whole drug development paradigm. The AI technology is used in each step of drug discovery to data mincing based on huge pharmacological data and machine learning process. Thebiggest hurdle in drug discovery and drug development is the time and expenditure required for the drug to be approved and released to the market, because of this pharma industry have begun to use AI technology in their drug development research. The AI technology being used in pharma and other industries is a narrowly focused type of machine intelligence designed to solve a specific task or set of tasks using automated algorithm.

Key words*: artificial intelligence,drug discovery, drug development, machine learning, pharma industry, pharmaceutical sciences.*

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOL01

PHYTOCHEMICAL INVESTIGATION AND PHARMACOLOGICAL SCREENING OF SOME SELECTED MEDICINAL PLANTS

Ganta Radhika Reddy*[1], Dr. H. Padmalatha[2], Dr. Rakesh K. Ja[3]

Department of Pharmacology, Shri Jagadish Prasad Jhabarmal Tibrewala University

Herbal medicine is a very ancient form of healthcare known to mankind. In fact, herbal medicine is the establishment of modern medicine. World Health Organization (WHO) estimates that around 4 billion people comprising of 80 % of the world population, are currently dependent on herbal medicine for some or the other aspect of primary health care. Diabetes mellitus is a disorder that affects the body's ability to make or use insulin. Insulin is a hormone produced in the pancreas that helps transport glucose. Anti-diabetic activity of Costus spicatus commonly called as Indian Head Ginger, Spiked Spiral flag. Two flavonol diglycosides, tamarixetin 3-O-neohesperidoside, kaempferide 3-O-neohesperidoside and the known quercetin 3-O-neohesperidoside, together with six other known flavonoids were isolated from the leaves of Costus spicatus. Animals fasted overnight and diabetes was induced by single intraperitoneal injection of STZ (45mg/kg body weight) prepared in 0.1 M Citrate buffer at pH 4.5. Citrate buffer in place of Streptozotocin was injected to control rats. After 72 hours of STZ injection, (taken as 0th day) fasting blood glucose levels of each animal was analyzed. Animals among the fasting blood glucose levels > 200 mg/dl were consider. The rats were separated into 5 groups and each group consisted of 6 rats and the duration of treatment was 45 days. Group I: Animals fed among the distilled water (negative control). Group II: Diabetic animals fed among the distilled water (positive control). Group III: Diabetic animals fed among the Glibenclamide (5mg/kg/b.w./day). Group IV:Diabetic animals fed among the ECS (300 mg/ kgb.w./day). Group V: Diabetic animals fed among the ECS (500mg/kg/b.w./day). Before (0th), during (28 st) and at the end of treatment (45th), body weight, fasting plasma glucose levels, SGOT, SGPT and ALP levels were measured. Plasma glucose levels were determined by Ortho Toluidine reagent method. SGOT, SGPT and ALP levels were measured from serum separated from the blood which was collected from the retro-orbital plexuses of the rats of all groups under light ether anaesthesia using a semiautomatic biochemical analyzer with commercially available biochemical kits. The obtained data were analyzed using the SPSS program, version 24. Data were figured as mean ± SE (for data of the biological study n=10, where for data of the in vitro study 3 replicates were used). ANOVA test was used to compare results among groups and $P < 0.05$ was significant. There are as yet numerous plants which have different restorative qualities yet not investigated and utilized. Plants contain numerous novel mixes with therapeutic qualities which need logical investigation. Several chemicals which are derived from plants acts as a drug is currently used.

Keywords: Anti-diabetic activity, Costus spicatus, Glibenclamide, SGOT, SGPT.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOL02

EFFICACY, PHARMACOKINETICS, PHARMACODYNAMICS, IMMUNOGENICITY, AND SAFETY OF RITUXIMAB (TEST PRODUCT, ZYDUS) VS RITUXIMAB (REFERENCE PRODUCT, ROCHE/GENENTECH) IN PATIENTS WITH DIFFUSE LARGE B CELL LYMPHOMA (DLBCL).

Diptimayee Jena

Assistant Professor, School of Pharmacy, ARKA JAIN University, Jamshedpur, Jharkhand, Pin-832108

Rituximab is frequently used to treat a variety of B-cell lymphoma. Rituximab alone can produce significant response rates and long-term remissions in several B cell malignancies, whereas combining rituximab with chemotherapy improves overall survival in others. Rituximab is an important part of the treatment for anti-B cell malignancies, although it does not work for everyone, and resistance to it is prevalent. In order to further develop rituximab, which is already a highly effective treatment, it is critical to understand the pathways by which it elicits anti-tumor responses. Diffuse large B-cell lymphoma (DLBCL) is a kind of lymphoma that affects B cells, which are responsible for antibody production.

Key words: Cancer, Rituximab, Malignancy, Chemotherapy.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOL03

ANTI-DEPRESENT ACTIVITY OF CROCUS SATIVA

Abdul rahman shafeeh

Yenepoya Pharmacy College and Research Centre, Yenepoya (Deemed to be university) Mangalore, Karnataka, India

Depression is a prevalent and serious medical condition that has an adverse impact on one's feelings, thoughts, and behaviour. Depression is a leading cause of disability and has been considered for one of 10 leading causes of disabilities. As an alternative to synthetic antidepressants with fewer side effects and more tolerance, natural herbal medications may be taken into consideration. Saffron as a medicinal plant has multiple therapeutic effects. The major bioactive compounds identified are safranal, crocin, and picrocrocin, which are responsible for its aroma as well as its bitter taste. The therapeutic effects of saffron are harbored in its bioactive molecules, notably crocin's. Crocin's have been demonstrated to act as a monoamine oxidase type A and B inhibitor. Furthermore, saffron petal extracts have experimentally been shown to impact contractile response in electrical field stimulation. According to several studies, saffron and its active components exhibit neuroprotective effects such as anticonvulsive, anti-Alzheimer anti-Parkinson, and anti-ischemic. Saffron exerts its anti-depressant activity by modulating the levels of certain chemicals in the brain including serotonin.

Key words: Anti-Depressant, Crocus Sativa, Crocins, Depression, Saffron.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOL04

EVALUATION OF WOUND HEALING POTENTIAL OF *DOLICHANDRONE FALCATA* EXTRACTS ON ANIMAL MODEL

Dipali Pandurang Shelke[1]*, Dr. Vijayendra Swamy S.M [2]

[1]*Channabasweshwar Pharmacy College, Latur* [2]*Director, S S R College of Pharmacy, SILVASSA – 396230*

Wounds affect a large number of patients and seriously reduce the quality of life. The wound as a medical problem was first discussed by *Maharshi Agnivesha* in *Agnivesha Samhita* (later known as *Charaka Samhita*) as *Vrana*. *Laghupanchamula* denotes a combination of the roots of herbs. However, in Ayurvedic classics, besides four common herbs viz. *Kantakari*, *Brihati*, *Shalaparni* and *Prinshniparni* have been documented to have wound healing activity. In the present study, the antimicrobial and Wound healing activity of extracts of *Dolichandrone falcata (*DF*)* were evaluated. Extracts were prepared by continuous hot extraction method. The Phytochemical analysis of the extracts were carried out. Then extracts were subjected to 2% and 5% Ointments preparation by fusion method. *In-vivo* study has showed that extracts of DF concentrations possess significant Wound healing activity with 2% and 5% Ointment but concentration of ethanolic extract 2% and 5% Ointment being more superior and showed significant to highly significant wound contraction (From $P<0.05$ to $P< 0.001$) when compared with standard Soframycin against excision wound model in rats. Observations were made for the decrease in level of wound contraction in rats.

Key word: Dolichandrone falcata, Phytochemical screening, Wound healing activity.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOL05

STUDY OF MULTIFETAL PREGNANCY

K.Sairama[1], E Navya pravala[2]

1St.Pauls College of Pharmacy, Turkyamjal, Hyderabad-501510, 2Department of Pharmacology, St.Pauls College of Pharmacy, Turkyamjal, Hyderabad-501510

Twin births account for approximately 3% of live births and 97% of multiple bouts in the United States. In the absence of assisted reproductive technology, dizygotic twins are far more common than monozygotic twins and account for 70% of all twins gestations. Whereas the instance of dizygotic twins is variable in different populations, the prevalence of monozygotic twinning is globally constant at 3 to 5 per a thousand births. Twin pregnancy presents a condition of development of two fetuses in the uterus and can be monozygotic (single ovum) and dizygotic (two ova). In case of fertilization and segmentation of one ovum monozygotic twins are produced, while in case of fertilization of two ova, which can originate from one or two Graffian follicles, dizygotic twins are developed.

Key words: monozygotic twins, dizygotic twins, gestation, fertilization.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOL06

CAR T CELLS ARE THE EQUIVALENT OF "GIVING PATIENTS A LIVING DRUG”

Akhila Seelam

St.Pauls College of Pharmacy, Turkyamjal, Hyderabad-501510

As their name implies, T cells—which help orchestrate the immune response and directly kill cells infected by pathogens—are the backbone of CAR T-cell therapy. And over the past decade, immunotherapy—therapies that enlist and strengthen the power of a patient's immune system to attack tumours —has rapidly become what many call the "fifth pillar" of cancer treatment. But another form of immunotherapy, called CAR T-cell therapy, has also generated substantial excitement among researchers and oncologists. Although CAR T-cell therapies are not as widely used as immune checkpoint inhibitors, they have shown the same ability to eradicate very advanced leukemias and lymphomas and to keep the cancer at bay for many years Exit Disclaimer. Currently available CAR T-cell therapies are customized for each individual patient. They are made by collecting T cells from the patient and re-engineering them in the laboratory to produce proteins on their surface called chimeric antigen receptors, or CARs. The CARs recognize and bind to specific proteins, or antigens, on the surface of cancer cells.

Key words: CAR T cells, immune response, cancer, immunotherapy, leukemia.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOL07

ROLE OF SEEDWEEDS IN DAILY LIFE

Padala Rishika*[1], Mrs Roja[2]

[1]*St Pauls College Of Pharmacy, Turkayamjal, 501510,* [2]*Department Of Pharmacology, St Pauls College Of Pharmacy, Turkayamja , 501510.*

Seaweeds (macroalgae) are, together with microalgae, main contributors to the Earth's production of organic matter and atmospheric oxygen as well as fixation of carbon dioxide. In addition, they contain a bounty of fibres and minerals, as well as macro- and micronutrients that can serve both technical and medicinal purposes, as well as be a healthy and nutritious food for humans and animals. It is therefore natural that seaweeds and humans have had a myriad of interwoven relationships both on evolutionary timescales as well as in recent millennia and centuries all the way into the Anthropocene. It is no wonder that seaweeds have also entered and served as a saviour for humankind around the globe in many periods of severe needs and crises. Indeed, they have sometimes been the last resort, be it during times of famine, warfare, outbreak of diseases, nuclear accidents, or as components of securing the fabric of social stability. Lessons to be learned from this history can be used as reminders and inspiration, and as a guide as how to turn to seaweeds in current and inevitable, future times of crises, not least for the present needs of how to deal with changing climates and the pressing challenges of sustainable and healthy eating.

Key words: Seaweeds, Anthropocene, Saviour.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOL08

IMMUNOSTIMULATORY EFFECT OF NAG ON RAW264.7 MACROPHAGES, MAPK SISGNALING AND TOLL LIKE RECETORS

Pathakota Roja[1], Dr.V.Santosh kumar[2]

[1]*Research scholar, School of Pharmaceutical Sciences,Vels Institute of Science, Technology and Advanced Studies (VISTAS), Pallavaram, Chennai - 600117, Tamil Nadu, India.*

[2]*Professor, Department of Pharmacology, Vels Institute of Science, Technology and Advanced Studies (VISTAS), Pallavaram, Chennai - 600117, Tamil Nadu, India.*

The present study is aimed to know the immunostimulatory activity of N-Acetyl D-Glucosamine using RAW264.7 macrophages.The RAW264.7 macrophages were cultured in DMEM medium supplemented with 10% FBS, 100 µmol/L penicillin, and 100 µmol/L streptomycin. Then theeffect of NAG was studied by using various parameters like Cell Viability Assay, Western Blotting Analysis, and measurement of ROS Production, Quantitative Real-Time PCR (qPCR), Phagocytosis Assay, and Measurement of NO Production. Role of NAG on MAK signaling path way and TLR receptors were also studied. All data were expressed as the mean ± SD of triplicate samples and were representative of at least three separate experiments.The results obtained were analyzed by one-way ANOVA, using Graph pad prism 8. P-values< 0.05 were considered to represent a statistically significant difference. The results were compared with RAW264.7 macrophages treated by standard drug. Use of polysaccharides as Nutraceuticals for the treatment of various diseases is now becoming sound. As they are widely available and free of toxicities, the present study was undertaken and showed the immunostimulatory effect on RAW264.7 macrophages in a similar fashion as standard drug.

Key words: DMEM medium, N-Acetyl D-Glucosamine, macrophages, immunostimulatory.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOL09

PHYTOCHEMICAL AND PHARMACOLOGICAL SCREENING OF CERTAIN BIOACTIVE COMPOUNDS

Peta Sudhakar[1], Dr.A.Rama Narsimha Reddy[2], Dr.S.Shobha Rani[3]

1Assistant Professor, St.Pauls College of Pharmacy, Turkayamjal, Hyderabad, 2Professor, CVM College of Pharmacy, Karimnagar, 3Associate Professor, IST, JNTUH

Diabetes mellitus is one of the major public health problems worldwide. Considerable recent evidence suggests that the cellular reduction-oxidation (redox) imbalance leads to oxidative stress and subsequent occurrence and development of diabetes and related complications by regulating certain signaling pathways involved in β-cell dysfunction and insulin resistance. Reactive oxide species (ROS) can also directly oxidize certain proteins (defined as redox modification) involved in the diabetes process. Pinitol shows glycemic control by enhancing pancreatic insulin release and improving insulin resistance. In the present study, we have identified pinitol effect on blood glucose and cholesterol. The pinitol impact on lipid and glucose metabolism was studied in fatty Sprague Dawley rats. Treatment with 3-O-methyl-D-chiro-inositol significantly reduced triglyceride, total cholesterol, and LDL levels. Dose-dependent effects were observed with pinitol compared with 125mg/kg and 250 mg/kg doses. Total cholesterol levels in hyperlipidemia induced by triton were reduced in a significant manner. An oral glucose tolerance test was conducted in fatty and lean rats pinitol pretreated showed a substantial reduction in glucose levels after 2 hours (21%)in the fatty rats compared to the control animals. The present study emphasizes an anti-hyperlipidemic effect of pinitol in the rat model, possibly by the inhibition of synthesis of VLDL.I t was also shown antioxidant activity in Sprague dawley rats.

Key words: Sprague dawley rats, Reactive oxide species (ROS), Pinitol, LDL, VLDL.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOL10

ESTIMATION OF THE EFFECT OF CHRYSIN AND DIOSMIN IN REDUCING OXIDATIVE STRESS-INDUCED SEIZURES

Navya pravala[1], Suhasini Koyyada[1]

Department of Pharmacology, St Pauls College of Pharmacy, Hyderabad, Telangana, India-501510

Seizures are one of the important neurodisorders effecting Human beings across the world. Several synthetic drugs used for convulsions shown side effects and drug interactions. Nature is a major source of safe and effective drugs. The main objective of the study is to estimate the effect of natural drugs Chrysin and Diosmin in reducing oxidative stress induced seizures. For this we have used the wistar mice, divided into five groups of six animals each. Seizures were induced by maximal electrical convulsive meter. Chrysin (25mg/kg) and Diosmin (30mg/kg) was tested against MES induced seizures. Phenytoin (100mg/kg) was taken as a standard. Mice were sacrificed after 24hrs of their last dose and estimated for biogenic amines i.e. adrenaline, dopamine and serotonin in brain. Biochemical parameters i.e. Malondialdehyde, Total Glutathione and Superoxide dismutase were estimated. Statistical analysis was performed using one way ANOVA followed by the Bonferroni test, $p<0.05$ was considered as statistically significant. Finally, found thet, Chrysin at doses of 25mg/kg and Diosmin at dose of 30mg/kg showed a significant ($p<0.05$) anti-epileptic action which is comparable with that of Phenytoin at a dose of 25mg/kg. Before drug treatment the biogenic amine levels of noradrenaline, dopamine and serotonin and anti-oxidant enzyme levels decreased compared to MES induced group mice. After drug treatment these levels significantly increased. The results suggest that chrysin (25 mg/kg) and diosmin (30mg/kg) has a considerable and reliable effect in reducing seizures in mice. Therefore, these can be developed as safe alternatives for synthetic drugs for convulsions.

Key words: Seizures, maximal electric shock, Chrysin, Diosmin.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOG01

ANALYTICAL FINGERPRINTING STUDIES & GREEN ENGINEERED SILVER NANOPARTICLES OF SPONDIAS PINNATA LEAVES (Lf) Kruz AND ITS APPLICATIONS - AN ECO-FRIENDLY APPROACH FOR NATRUAL PRODUCTS DRUG DISCOVERY

V Arun Reddy[1*], V Narmada[2]

[1] Department of Pharmacy, Pharmaceutical Analysis & QA, University College of Technology(A), Osmania University, Tarnaka, Hyd-500 007, TS, India*

[2] Assistant Professor, Department of Pharmacy, University College of Technology(A), Osmania University, Tarnaka, Hyd-500 007, TS, India*

Nanotechnology has changed the outlook of researchers towards science and technology. The enhanced surface area of the particles due to their nano size is contributing to the wide range of applications are used. The main aim of present research work is extraction, isolation and determination of structure elucidation & pharmacological activity of an isolated compound. Green fabrication(Synthesis) of silver nanoparticles (AgNPs) of spondias pinnata leaves and biological activity. To investigate the phyto-constituents present in plant and to determine structure & biological activity. Find new applications of AgNPs. Till date no reports of green synthesis of silver nanoparticles and isolation. Hot Plate/ Microwave Assisted methods are used for synthesis of AgNPs and characterization was done by SEM, TEM, FTIR, UV, XRD, EDAX & Nanoparticle analyzer(Size & Zeta potential). Activities such as Antimicrobial, Anticancer, Antiucler, Drug identification and DNA Binding studies. Extraction by Soxhlet apparatus and isolation by Column chromatography. TLC,HPTLC. Structural confirmation by analytical instruments such as UV, IR,MASS, NMR,GC-MS,LC-MS. An eco friendly, rapid & a convenient green method for synthesis of AgNPs was reported. Isolation of compounds from hexane extract of plant. Antimicrobial. Anticancer activites

Keywords: Green Synthesis, Spondias Pinnata, Agnps, GC-MS, SEM, Antimicrobial, Isolation.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOG02

ANTI-ARTHRITIC STUDY OF SARCOSTIGMA KLEINII: AN ENDEMIC PLANT TO WESTERN GHATS OF INDIA

Leemol Varghese*, Shanaz Banu

Department of Pharmacognosy, Dayananda Sagar University, Bengaluru, Karnataka, India- 560078.

Sarcostigma kleinii is a plant of the Western Ghats and has not been explored much for its pharmacological and phytochemical profile. Arthritis is becoming prevalent in geriatrics due to various intrinsic and extrinsic factors. There is no specific treatment for arthritis, and only symptomatic relief is available. A few plants have been mentioned in the traditional systems of medicine to treat the root cause of inflammations and arthritis. In the current study, the ethanolic seed extract was studied against CFA & Zymosan-induced arthritis rat models. The rats were administered 0.1mL of CFA into the right hind paw intradermally to induce arthritis. The CFA model was created by the injection of 0.5ml CFA into the synovial cavity of the right knee joint of the hind leg of rats. The ethanol seed extract of S. kleinii was tested on the arthritic animals, and the reduction in joint swelling and biochemical parameters was estimated. From the results, it was found that the extract could significantly revert arthritis symptoms efficiently when compared to the standard Indomethacin.

Key words: Sarcostigma kleinii; Indomethacin; Arthritis; CFA model.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOG03

BIOMARKERS FROM MARINE SOURCES AS ANTI-CANCER AGENTS

G. Tharun *[1], Dr. Sneha Thakur [2] , Ms. Mary Manisha [3]

1) B.pharm IV-year, St. Pauls college of pharmacy, Turkayamjal, Nagarjuna Sagar Road,501510

2)Head of a Department, Department of Pharmacognosy, St. Pauls college of pharmacy, Turkayamjal, Nagarjuna Sagar Road,501510

3)Research scholar, Middlesex University, Hendon Campus, NVV4 BT, United Kindom

Cancer is the world's leading cause of death after heart diseases and involves abnormal cell growth at a primary site and the potential to spread to other parts of the body. The cancer stem cells (CSC) niche plays a crucial role in driving the spread of the tumor and are thought to provide treatment resistance. Marine organisms such as sponges, tunicates, fishes, soft corals, nudibranchs, sea hares, opisthobranch, Molluscs, echinoderms, bryozoans, prawns, shells, sea slugs, and marine microorganisms are sources of bioactive compounds. It is a sub branch of terrestrial pharmacognosy. Generally the drugs are obtained from the marine species of bacteria, virus, algae, fungi and sponges. Some drugs which are obtained from marine sources like Discodermolide, bryostatins, sarcodictyin, and eleutherobin are the most effective anticancer drugs produced mainly by marine bacteria. The selected marine natural products can be leads as a source of bioactive compounds with anti-cancer properties to target CSC, in order to develop novel anti-cancer therapeutic strategies.

Key words: Marine Sources, Microorganisms, Resistance, Tumorgenesis.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOG04

IN SILICO MOLECULAR DOCKING OF HERBAL BIOACTIVES FOR OVARIAN CANCER

Gayathri Rapolu [1] , Likitha Thotakura[2] , Ms. Mary Manisha Mannam [3] , Dr. Sneha Thakur*[4]

1; 2) B. Pharmacy 4 th year, St. Pauls College of Pharmacy, Turkayamjal, Nagarjuna Sagar road, 501510.
3) Research Scholar, Middlesex University, Hendon Campus, NW4 4 BT, United Kingdom
4)Associate professor, HOD, Department of pharmacognosy, St. Pauls College of Pharmacy, Turkayamjal, Nagarjuna Sagar road, Hyd-501510.

Ovarian cancer that forms in the epithelial tissue of the ovary or malignant germ cell tumours is observed to be most common in many women around the globe. In western countries the rate of cancer is crossing the graph that it actually used to be in the last decade. There are many synthetic treatments available in the market to treat ovarian cancer at many stages. However, most of the treatments are losing their efficiency as the drug administered could not show effective infusion rate or effective binding to the receptors as desired. Hence, to avoid the limitations that are existing right now molecular docking is the most preferred method in understanding the ligand's binding affinity. Most of the drugs that are utilized for the treatment are derived from plant bases and are extracted to formulate the desired formulation for the treatment. Hence, to avoid the limitations that are existing right now molecular docking is the most preferred method in understanding the ligand's binding affinity (ligand- protein interaction). In this research the promising compounds for the cancer treatment were identified in initial screening and were subjected to molecular docking to understand the ability of the ligand to bind to the receptor and show its effectiveness. We have screened five molecules, amongst them rutin and ursolic acid showed more potency towards the receptors and drug targeting affect for these ligands was observed to be more effective.

Key words: Ovarian Cancer, molecular docking, binding affinity, herbal bioactives, ligand –protein interaction.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOG05

FORMULATION AND EVALUATION OF ANTIUROLITHIAC HERBAL TEA POWDER

T.Likitha*, Rapolu Gayathri, Dr. Sneha Thakur, Ms. Mary Mannam

St. Pauls College of Pharmacy, Hyderabad

Urolithiasisis is a complex process that is a consequence of an imbalance between promoters and inhibitors in the kidneys. Urolithiasis affects 5-15% of the population worldwide with average recurrence rates of about 50%.. The worldwide incidence of urolithiasis is quite high, and more than 80% of urinary calculi are calcium oxalate stones or calcium oxalate mixed with calcium phosphate. The rationale was designed to formulate an Antiurolithiac herbal product which is cost effective and has proven Antiurolithiac activity. There no literature report of kidney care management programme under ayurvedic system. The following ingredients were used to formulate the herbal tea i.e Bryophyllum, Punarnava, Cardamom, Tulsi in suitable proportions. The formulation parameters such as physical properties (pH, solubility, Moisture content) were determined. The chemical properties i.e phytochemical screening was performed which revealed presence of steroids and Triterpenoids that might be responsible for activity. The *Invitro* Antiurolithiac activity was evaluated which proved 90% efficacy of the product. The i*nvivo-invitro* correlation for dosage needs to be further investigated for safety and efficacy.

Key words: Urolithiasis; Herbal Tea; Phytochemical screening; Invitro activity.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOG06

SCREENING *IN-SILICO* ANTIDEPRESSANT ACTIVITY OF AQUEOUS EXTRACT OF LEAVES OF *RUMEX ACETOSA* L.

Mohd Mohiuddin Shafeef

Research Scholar, PhD In Pharmaceutical sciences, Vels Institute of Science, Technology & Advanced Studies (VISTAS), PV Vaithiyalingam Rd, Velan Nagar, Krishnapuram, Pallavaram, Chennai, Tamil Nadu 600117

The objective of this study is to extract rumex acetosa leaves using various solvents, characterise these extracts and finally evaluate in silico antidepressant activity. *Rumex acetosa* belongs to polygonaceae family and is often called sorrel. This plant's leaves were gathered and extracted using a variety of solvents including petroleum ether, ethyl acetate, ethanol, chloroform, and ultimately water. All these extracts are explored to check for various phytoconstituents by commonly used phytochemical screening methods. It was found that AERA contained many phytoconstituents like alkaloids flavonoids glycosides and anthocyanins. This aqueous extract was further screened by FTIR, HPLC and GCMS analysis techniques. In FTIR analysis, AERA showed peaks at 116311 cm -1 and 106088 cm -1 corresponding to anthocyanins. HPLC analysis showed the presence of peaks with the retention time of 6.75, 18.94, 25.19, 28.04, 34.72, and 39.37 min corresponding to sennoside, aloe-emodin, rhein, emodin, chrysophanol, and physcion respectively. In GCMS analysis, peaks at 18.15, 18.50, 20.32, 20.48, and 24.99 correspond to rhein, dibutyl phthalate, emodin, octadecanoic acid, and chrysophanol respectively. Five phytoconstituents - aloe-emodin, chrysophanol, emodin, physcion, and rhein - are further assessed for in silico antidepressant effectiveness based on characterisation data. As rhein has the highest negative value of glide energy it indicates a stronger binding affinity for MAO-A than all other screened constituents. Thus the study concludes regarding in silico anti-depressant activity against MAO-A. Further present research puts forth a way to carry out the isolation of therapeutically proven phytoconstituents and to evaluate these constituents for their biological activity.

Key words: Rumex acetosa; Isolation; MAO-A; Biological activity.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOG07

DIATOMS FOR CO 2 FIXATION IN LARGE SCALE INDUSTRIES AND REDUCE GLOBAL WARMING

Ms. Senigarapu Soumya

Assistant professor, Department of Pharmaceutics, St. Pauls College of Pharmacy, Turkayamjal, Nagarjuna Sagar Road, 501510.

Diatoms are single celled organisms that are responsible for fixing about 15 billion tons of carbon dioxide annually; this is more than the amount of carbon dioxide captured by all the plants in the rainforest annually. They capture carbon dioxide and give out oxygen and other organic by-products. Hence, if cultured efficiently upon directly all the carbon dioxide produced by the processes in the industry, diatoms can convert it to oxygen. Electricity production industries combined with chemical industries release, contribute to release of 50% of carbon dioxide globally. At the present rate global warming can increase the temperature of the planet by 2.7 Fahrenheit by the year 2050 and have devastating effects on the entire planets population. So measures like the above can reduce the ill effects of global warming.

Key words: Diatoms, Co 2 Fixation, Global Warming.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOG08

SMART BIOMANUFACTURING

Mayank Sharma, Jagruthi Peddapaka

St Pauls College Of Pharmacy, Hyderabad-501510

Biomanufacturing is a type of manufacturing that utilizes biological systems e.g., living microorganisms, resting cells, plants, animals, tissues, enzymes or in vitro synthetic i.e., enzymatic systems to produce commercially important value – added biomolecules for use in the agriculture, food, energy, material, and pharmaceutical sciences.

In the beginning of this century, new product needs like eg., renewable energy, artificial food, and regenerative medicines and new research tools such as, induced pluripotent stem cells (IPSC), metabolic engineering, synthetic biology, system biology, cascade biocatalysis, etc ., would lead to a new revolution of biomanufacturing, which will produce new products those are new functional tissues, new drugs or produce existing products by far more effective methods as compared to existing methods in terms of product yield, volumetric productivity , product quality, scale – up feasibility, and sustainability etc. Biomanufacturing would help to address some of the most important challenges of humankind such as food security, energy security, security and sustainability , water crisis, climate change, health issues, and conflict related to the energy, food and water.

Key words : Smart Biomanufacturing, Smart Biotechnology, Induced Pluripotent Stem Cells, Metabolic Engineering, Genetically Modified Organisms (Gmo).

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOG09

IMPORTANCE OF USAGE OF NEUTRACEUTICALS TO HUMAN KIND

M.Anjali, Mr.Santhosh

St Pauls College Of Pharmacy, Hyderabad-501510

Neutraceutical is the hybrid of nutrition; and ;pharmaceutical. Nutraceuticals, in broad, are food or part of food playing a significant role in modifying and maintaining normal physiological function that maintains healthy human beings. The principal reasons for the growth of the nutraceutical market worldwide are the current population and the health trends. The food products used as nutraceuticals can be categorized as dietary fibre, prebiotics, probiotics, polyunsaturated fatty acids, antioxidants and other different types of herbal/ natural foods. These nutraceuticals help in combating some of the major health problems of the century such as obesity, cardiovascular diseases, cancer, osteoporosis, arthritis, diabetes, cholesterol etc. In whole, 'nutraceutical' has lead to the new era of medicine and health, in which the food industry has become a research oriented sector.

Key words : Neutraceuticals, osteoporosis, arthritis, diabetes, cholesterol.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOG10

NOVEL INVENTIONS AND THEIR DEVELOPMENTS FOR A BETTER WORLD

Rushitha

Bojjam Narasimhulu College for Women Hyderabad-500059

Technological advances are widely spread out in every sector and its main vision is to make life of individual smooth and smart. It has invaded pharmaceutical sector for years to innovate and develop formulations. The primary objective of this study is to describe new inventions in medical field using advanced computer technology and helps in research and treatment to patients. The abstract focuses on certain innovations as Bionic eye, Nanobots and 3D-BioPrinting. Bionic eye uses Microchip Technology, Nanobots uses Nanotechnology and Bioprinting uses 3D printing technology. The Implementation of the mentioned innovations with Artificial Intelligence would make a breakthrough in future and have better impact on large scale of patients. The Goal of this study is to develop research processes in more efficient way and helps in drug development. This study also aims at Diagnoses, Prevention and to Eradicate diseases as quick and precise as possible and to help patients to get the treatment in an advanced way. The use of Artificial Intelligence in medicine would be a Futuristic technology and the treatment based on A.I technology would have good patient compliance.

Key words: Bionic eye, Nanobots, 3D-Bioprinting, Futuristic technology.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOG11

ETHNOBOTANICAL SURVEY OF MEDICINAL PLANTS USED IN THE TREATMENT OF DIABETES IN RANGAREDDY DISTRICT, TELANGANA, INDIA

Garlapati Sravani Reddy*.Thatikayala Mahender,

Avanthi Institute of Pharmaceutical Sciences, Hayathnagar, Hyderabad, Rangareddy 501512, India.

Diabetes is a chronic disease that occurs either when the pancreas does not produce enough insulin or when the body cannot effectively use the insulin it produces. Insulin is a hormone that regulates blood sugar. Diabetes is broadly classified in to two types namely Insulin- Dependent Diabetes Mellitus, Non-Insulin-Dependent Diabetes Mellitus. In this research the ethnobotanical survey was conducted rural area of Rangareddy district of Telangana, India and collected 20 medicinal plants used to treat diabetes. This survey tried to make everybody being known about natural medicines used to cure Diabetes and documentation of medicinal plants for future generation.

Key Words: Diabetes, Ethnobotanical, Medicinal plants.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCPO/OCOG12

MOLECULAR DOCKING STUDY OF PHYTOCHEMICALS AGAINST INFECTIOUS DISEASES

Chennoju Shashank*, Thatikayala Mahender, Dalapally Aakarsha

Avanthi Institute of Pharmaceutical Sciences, Hayathnagar, Hyderabad, Rangareddy 501512, India.

The secondary metabolites produced by the plant are used for growth, development and protection of plants against animals. The metabolites produced by plants are used to treat many diseases. In this research performed the docking study of secondary metabolites of plant products against infectious diseases like Covid-19, HIV and Tuberculosis. All the plant constituents inhibiting the selected target. The following plant constituents inhibiting the target by binding with the target at low energy. The binding energy of Nimbin found to be - 169.44 Varicella zoster virus protease, the binding energy of curcumin found to be -135.3 Covid-19 main protease and the binding energy of Thalassiolin A found to be -131.17 against Reverse transcriptase. The present work focused on the bioactive phytochemicals against infectious diseases with their molecular docking study.

Key words: Phytochemicals, Covid-19, HIV, Tuberculosis, Infectious Diseases.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOG13

EVALUATION OF ANTI BACTERIAL ACTIVITY OF AQUEOUS FLOWER EXTRACT OF CALOTROPIS PROCERA

Narwa Rucha Thatikayala Mahender*, Chinnabeera Prathyusha,

Avanthi Institute of Pharmaceutical Sciences, Hayathnagar, Hyderabad, Rangareddy 501512, India.

Calotropis procera is a species of flowering plant in the family Apocynaceae . The plant of this species grows in dry habitat where rainfall is limited 150 to 1000 mm and also found in the area of excessive drained soil as much as 2000 mm of annual precipitation. It is also found in the common habitat of road-side, beachfront dunes, and widely disturbed in the urban areas. It has analgesic activity, antinociceptive activity, anticonvulsant activity and antimalarial activity etc. In this research Calotropis procera flowers were collected and powdered. The active constituents extracted by using different methods of extractions for 24 hours by using double distilled water. The flower extract of Calotropis procera tested against the gram positive, gram negative bacteria. The flower extract of Calotropis procera exhibited potent antibacterial activity against Escherichia coli at 100µL and Bacillus subtilis at 75 µL compared with Streptomycin.

Key words:Calotropis procera, Antibacterial, Escherichia coli, Bacillus subtilis.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOG14

ARTIFICIAL INTELLIGENCE IN CANCER IMAGING: CLINICAL CHALLENGES AND APPLICATIONS

Nabeela Fatima

St Pauls College Of Pharmacy, Turkaymajal, Hyderabad-501510

Artificial intelligence (AI) has strong logical reasoning ability and independent learning ability, which can stimulate the thinking process of the human brain. AI technologies such as machine learning can profoundly optimize the existing mode of anticancer drug research. But at present AI also has its relative limitation. In this paper, the development of artificial intelligence technology such as deep learning and machine learning in anticancer drug research is reviewed. At the same time, we look forward to the future of AI. . AI may automate processes in the initial interpretation of images and shift the clinical workflow of radiographic detection, management decisions on whether or not to administer an intervention.. Artificial intelligence is of great significance for the early diagnosis of tumors based on image data. AI can also help diagnose and treat tumors. Accurate early diagnosis and prognosis prediction of cancer are essential to enhance the patient's survival rate. Within cancer imaging, AI finds great utility in performing three main clinical tasks: detection, characterization, and monitoring of tumors. This new technology can also generate socioeconomic benefits for poor regions because they can send digital images to labs of other developed regions to have diagnosis of cancer types, reducing as far as possible current gap in healthcare sector among different regions.

Key words: Artificial Intelligence, Cancer Imaging, Clinical Challenges.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOG15

HRLCMS AND IN VITRO ANTIDIABETIC STUDY OF STEVIA REBAUDIANA

Shaik Harun Rasheed[1] , Segu Prathyusha [2] , Mutcherla Pradeep kumar [3] , Satrasala Neelima [4]

1 Department of Pharmaceutics, School of Pharmacy, Guru Nanak Institutions Technical Campus, R. R. District, Hyderabad, India, 501506 (An Autonomous Institution),

2 Department of Pharmacognosy, School of Pharmacy, Guru Nanak Institutions Technical Campus, R. R. District, Hyderabad, India, 501506 (An Autonomous Institution),

3 Department of Pharmaceutics, Vasavi Institute of Pharmaceutical Sciences, Vasavi Nagar, Peddapalli, Siddavatam, Kadapa – 516247

4 Department of Pharmacology, Vasavi Institute of Pharmaceutical Sciences, Vasavi Nagar, Peddapalli, Siddavatam, Kadapa – 516247,

The current analysis was aimed to study the phytochemical profile and in vitro antidiabetic capacity of Stevia rebaudiana, was used to identify the phytochemicals present in the extract. Methodology: The outcomes of HRLCMS showed the presence of 8 compounds. The inhibition of enzymes like alpha amylase and alpha glucosidase delays the rate of glucose absorption thus reducing blood glucose levels in the experimentation models. The current study confirms the Stevia rebaudiana had remarkable antidiabetic activity and hence holds future potential in the treatment of diabetes.

Key words: Stevia rebaudiana, alpha Glucosidase, diabetes.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOG16

NEUROPROTECTIVE EFFICIENCY OF SHANKHAPUSHPI: NORTH VS SOUTH

Anjali A. Kide[1], Sharada L. Deore[1], Bhushan A. Baviskar[1]

1. Government College of Pharmacy, Kathora Naka, Amravati, Maharashtra – 444604

Shankhpushpi is the well known memory booster and neuroprotective Ayurvedic herb. This nootropic herb is controversy asociated herb due to sevaral species have been mentioned as shankhpushpi in different literatures. Botanically there are four varieties of shankhpushpi - Canscora decussata Schult, Evolvulus alsonoides Linn, Convolvulus pleuricaulis Choicy and Clitora ternatea Linn. Among these varieties, Clitorea ternatia is accepted as chief source of Shankhpushpi by Vaidyas in south region of India whereas in North India, Convolvulus pleuricaulis is known as chief shankhpushpi herb. In official books of India, Convolvulus pleuricaulis have been recognized as Shankhpushpi. Still Clitora ternatea is widely used in memory enhancing and neuroprotective formulations under the name of Shankhpushpi. Both herbs are totally different from each other from morphological, phytochemical aspects but have similarity in neuropharmacological activity. Both herbs have been extensively studied for their effect on β – amyloid induced neurotoxicity and other neuroprotective parameters. However, pharmacological comaparative investigation of these two North and South shankhpushpi as neuroprotective is still missing. Present article is the brief comparative discussion about information of Clitora ternata and Convolvulus pleuricaulis herb in south and north Indian traditional literature, evidence based research on neuroprotective efficiency of these two varieties both invivo and invitro, their clinical trial performances and current status in the market, as well as frequency of use in marketed memory enhancing formulations. This comparative investigation highlights the most significant Shankhpushpi variety among these two against neurodegenerative diseases like Alzheimer's disease, Parkinson's disease and other types of dementia. This data will be helpful to select the appropriate Shankhpuspi variety for the development of a prominent drug therapy against neurodegerative diseases and avoid the use of inferior quality drug.

Key words: Shankhpuspi, Parkinson's disease, neurodegerative diseases.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOG17

SHILAJIT : EXTRACTION, ENRICHMENT & FORMULATION.

Shifa Khatri*, Dr. Swati Patil

Department of Pharmacognosy, Prin. K. M. Kundnani College of Pharmacy, Cuffe Parade, Mumbai- 400005

Incidences and mortality from cardiovascular illnesses have grown during the last few decades. In patients with pre-existing cardiac disease, the COVID-19 pandemic has exacerbated cardiovascular problems. Researchers observed that rates of many conditions, comprising coronary heart failure and stroke, had been drastically higher in those who had recovered from COVID-19 as compared to those who did not have the disease. Herbal medicine is becoming more and more popular due to its relatively high safety and low toxicity. Shilajit has several beneficial properties because it primarily comprises fulvic acid and more than 84 minerals. It demonstrates antioxidant activity, which is a key factor in cardioprotection. Shilajit is appropriately referred to as "Rasayana/ Rasayanam"; it translates as "rejuvenator" in Ayurvedic and Siddha scriptures since it prevents illnesses and improves the quality of life. The current study involved the collection, authentication, purification, and use of several extractive solvents to achieve high yield, then the extract was enriched by using organic solvents. UV-Vis spectroscopy was performed on each of the enriched samples, and the results showed that the enriched samples had increased fulvic acid concentrations. Fulvic acid was used as a standard in thin-layer chromatography. The extract's in-vitro antioxidant activity was assessed using the DPPH assay, and the results indicated good antioxidant activity. phytosomes were formulated by rapid injection methods for extract and enriched extract, and they were characterized using several spectroscopic techniques. According to the study's findings, combining novel formulation with conventional drug may improve its therapeutic potential and bioavailability.

Key words: Cardioprotection, Fulvic acid, Shilajit, Antioxidant, Phytosomes.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOG18

ANTIARTHRIC POTENTIAL OF DICHROSTACHYS CINEREA (L.) WIGHT & ARN.ROOT

Dr.S.Jayakumari

Professor, Department of Pharmacognosy , School of Pharmaceutical Sciences, Vels Institute of Science Technology and Advances Studies, Old Pallavarm,Chennai.Tamilnadu,India

The traditional plant, Dichrostachys cinerea (L.) wight & Arn. belongs to the family Mimosaceae, is commonly used by tribal of India and South Africa. The root of the plant is claimed to possess more therapeutic medicinal uses such as anti-inflammatory, diuretic, used in rheumatism, urinary calculi and in diarrhoea, which is evident from literature. But literature review shows no scientific data available on this plant for the above mentioned therapeutic uses. So we felt it is worth able to validate scientifically the folklore claims for its therapeutic activity. Phytochemical study for investigation of chemical constituents of the plant root and its activities to prove its efficacy on support of folklore uses. Qualitative phytochemical analysis of root revealed that petroleum ether extract showed the presence of terpenoid and steroid. Chloroform extract showed the presence of glycosides, the alcoholic extract showed the presence of tannin, flavonoids and phenolic compounds. Aqueous extract showed positive test for saponin and tannins. Further the total alcoholic extract root was found to contain rich amount of total phenolic compounds, tannins and flavonoids. Ethno botanical information and thorough literature review of plant made us to investigate analgesic, antiinflammatory, antiarthritic activity of root extract were found to show significant analgesic activity in both centrally and peripherally mediated analgesia. Anti-inflammatory screening indicates that root were effective in acute model. Hence anti- arthritic activity was carried for root extract of the plant and found to be effective. As the extracts showed analgesic and anti-inflammatory activity, efforts were also made to screen for anti- pyretic activity. We investigated the possible anti-oxidant properties of Dichrostachys cinerea because such actions may contribute to explain the therapeutic effect in various systems. Besides the ethanolic extract of root of the plant was also found to contain higher concentration of total phenolic compounds including flavonoids and tannins. Flavonoids and tannins are natural products which have shown to possess various biological activities related to anti-oxidant mechanism. So anti-oxidant potential of extracts observed in the present study may be attributed to the presence of flavonoids and tannins. Leaf and root showed comparatively higher anti-oxidant efficacy which is reflected in its anti inflammatory activity carried out. Besides earlier reports, present phytochemical investigation revealed the presence of phytoconstituents such as flavonoids, tannins and polyphenolic compounds, steroids and terpenoids also supports The data retrieved from the observations have been formulated into a diagnostic protocol of Dichrostachys cinerea Root ..The promising biological activities will definitely lead to develop a new drug from the plant root and also form the foundation for a future research work in “bioactivity guided isolation of active principles”.

Key words: Dichrostachys cinerea Root, flavonoids, tannins.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOG19

HERBS FOR HEART: BENEFITS FOR POST-COVID CARDIAC PROTECTION

Rujuta Gandhi * , Dr. Swati Patil,

Prin, K.M. Kundnani College of Pharmacy

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)-caused coronavirus disease 2019 (COVID-19) pandemic, which began in early December 2019, has spread quickly over the world and presented an unprecedented threat to human health. The disease is characterized by cytokine storm, resulting in endothelial inflammation/dysfunction, micro- and macro-vascular thrombosis, which may damage organs other than the lung. COVID-19 substantially impairs the cardiovascular system. According to the study published in the journal Nature Medicine, patients with COVID-19 were more likely to have a wide range of cardiovascular conditions. Thus, one of the most useful tools in the therapeutic management of post-covid cardiovascular illnesses will be cardio-protection and treatment. Despite improvements in CVD management and therapy, CVDs continue to claim more lives than other cancer types combined. As a result, there has been significant enforcement of CVD prevention in recent years. Since ancient times, people have used herbs to treat cardiovascular conditions. The journal of Clinical Phytoscience published an article in 2021 that used cluster analysis to choose 128 plants. These herbs effectively protected the heart. This study and subsequent analysis revealed that herbal remedies like Arjuna, Tribulus, and Tinospora have potent cardioprotective characteristics. The evidence for these herbs' cardiovascular protection is highlighted in the current review.

Key words: COVID-19, cardiovascular diseases, Arjuna bark, Tribulus terrestris, Tinospora cordifolia.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOG20

ENGINEERED SILVER, CURCUMIN & CHITOSAN LOADED NANOFIBROUS SCAFFOLDS FOR TARGETING TYPICAL MICROBIAL BIOFILMS IN CHRONIC INFECTIOUS WOUNDS

Tamatam Sunilkumar Reddy*, Shanker Kalakotla

Department of Pharmacognosy & Phyto-Pharmacy, JSS College of Pharmacy, JSSAcademy of Higher Education & Research, Ooty, Nilgiris, Tamil Nadu, India.

Over 6.5 million individuals are affected with non-healing or slow-healing chronic wounds, with 90% of them developing microbial biofilm. Biofilms delay wound healing, which retains the wound in an inflammatory condition. When microorganisms grow and migrate deeper into the wound tissue, they cause a local response. The type of microorganism's presence will impact the wound infection's progression. A systemic inflammatory reaction, sepsis, and organ failure characterize systemic infection, resulting in death. The preparation of Silver nanoparticles, curcumin, and chitosan solution for scaffold preparation by electrospinning method. Electrospinning will be set to the positive electrode on a high voltage DC power supply to the solution that enclosed a 5 ml syringe. The negative electrode will be connected to the needle used as the nozzle. SEM, TEM, XRD, FTIR, PSA, ZETA SIZER, UV equipment will be used to analyze the Nanofibrous scaffolds for surface morphology, particle size, stability, amorphous natures. Up to 20 bacterial species will be found in each of the four types of chronic wounds, and the majority of them will be from the genera Staphylococcus and Pseudomonas. Nanoscaffolds engineered with silver, curcumin & chitosan herbal medication would be essential in inhibiting biofilm formation and healing the wound. Silver complex Herbal-based Nano scaffold contains Silver-Effective against a broad spectrum of bacteria and fungi (Broad antimicrobial efficacy). In conclusion, these findings have suggested the usage of a Silver complex Herbal-based Nano scaffold for efficient and safe removal of mature biofilms from the wound site and improving infection clearance and promoting wound healing in-vivo.

Key words: Chronic Infectious Wounds, Nanofibrous Scaffolds, Silver, Chitosan, Curcumin, Tissue Engineering, Microbial Biofilms.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOG21

ANTIDIABETIC EFFECT OF POLYHERBAL FORMULATION IN STREPTOZOTOCIN – NICOTINAMIDE INDUCED DIABETIC RATS

Segu Prathyusha [1], Malarkodi Velraj[2]*

1. Department of Pharmacognosy, VELS Institute of Science, Technology & Advanced Studies, Chennai, Tamil Nadu, India, 600117, malarkodisanna@gmail.com

2. Department of Pharmacognosy, School of Pharmacy, Guru Nanak Institutions Technical Campus, R. R. District, Hyderabad, India, 501506 (An Autonomous Institution),

The present study was aimed to validate the traditional use of Poly herbal formulation (PHF). PHF was formulated using extracts of three different medicinal plants and antidiabetic activity was evaluated on Streptozotocin – nicotinamide (STZ – NA) induced diabetic rats. Biochemical, haematological, histopathological parameters were assessed in this study. Therefore, this work assessed the antidiabetic action of PHF from the selected medicinal plants. The acute and sub-acute toxicity studies of the PHF did not show any toxic symptoms. The antidiabetic activity of the PHF (200 and 400 mg/kg) was screened against STZ - NA induced DM in rats with fasting Blood glucose level (BGL) more than 220 mg/ dL were considered diabetic. CONCLUSION: PHF showed significant antidiabetic activity at 200 and 400 mg/kg (170.7 mg/dL and 147.5 mg/dL respectively), and this effect was comparable with that of glibenclamide.

Key words: Antidiabetic activity, biochemical estimation, histopathologic analysis. Michelia champaca bark, Scoparia dulcis whole plant and Ziziphus mauritiana leaf.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOG22

EXTRACTION AND ENRICHMENT OF ARJUNA, SHILAJIT AND ASHWAGANDHA : A CARDIO PROTECTIVE TRINITY

Aliefia Lehri*, Dr. Swati Patil

Department of Pharmacognosy,K. M. Kundnani College of Pharmacy, Mumbai.

Plant based medicines and drugs of natural origin have held great significance in various systems of traditional medicines. Some of these drugs demonstrate equal potency as their synthetic counterparts and generally offer a better safety profile. The past few decades have witnessed a rise in cardiovascular diseases and other such lifestyle disorders. Drugs such as Terminalia Arjuna, Shilajit and Withania Somnifera have been known for their cardio protective action as well as their potential at providing holistic wellness. The current research involved preparation of aqueous and hydro alcoholic extracts of T. Arjuna, Shilajit and *W. Somnifera.* The aqueous extracts were further subjected to enrichment using petroleum ether and ethyl acetate. The extracts were scanned using a UV vis spectrophotometer and the peak heights observed for the enriched extracts were found to be higher than that of the aqueous and hydro alcoholic extracts thus confirming that the extracts have been enriched with respect to the major phytoconstituents thereby increasing their potential for cardioprotective activity.

Key words: Herbal drugs; Cardioprotectiive activity; Extraction; Enrichment.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOG23

ROLE OF ARTIFICIAL INTELLIGENCE IN PHARMACY

Muteeb Ahmed

Sultan-ul-uloom College of Pharmacy Hyderabad-501510

The advancement of computing and technology has invaded all the dimensions of science. Artificial intelligence (AI) is one core branch of Computer Science, which has percolated to all the arenas of science and technology, from core engineering to medicines. Thus, AI has found its way for application in the field of medicinal chemistry and heath care. The conventional methods of drug design have been replaced by computer-aided designs of drugs in recent times. Additionally, the target proteins can be conveniently identified using AI, which enhances the success rate of the designed drug. The AI technology is used in each step of the drug designing procedure, which decreases the health hazards related to preclinical trials and also reduces the cost substantially. The AI is an effective tool for data mining based on the huge pharmacological data and machine learning process. Hence, AI has been used in de novo drug design, activity scoring, virtual screening and *in silico* evaluation in the properties (absorption, distribution, metabolism, excretion and toxicity) of a drug molecule. Various pharmaceutical companies have teamed up with AI companies for faster progress in the field of drug development, along with the healthcare system.

Key words: Deep learning; artificial neural network; drug design; drug discovery; machine learning; pharmaceuticals.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOG24

Artificial Intelligence in Drug Discovery and Development

Mohammadi Saughat*, Mohammed Riyaz*

Sultan-Ul-Uloom College of Pharmacy; Mount Pleasant, 8-2, 249 to 267, Road Number 3, Banjara Hills, Hyderabad, Telangana, India.

Artificial intelligence (AI) has recently been developed into a trending subject in the area of medicinal care industry. Biopharmaceuticalindustries aremaking efforts to approach AI to enhance drug discoveryprocess.AI is being introduced in the medical field to keep a medical record in digital format and conduct patient check up using smart technologies.It provides solutions, especially in targeted treatments, uniquely composed drugs and personalized therapies.AI eases up the process of comparing different structures of a single drug moiety, to know the best structure that gives the desired therapeutic effect. Computer aided design for drug is based on concept of artificial intelligence.AI Open data sharing and model development will play a central role in the advancement of drug discovery with AI.AI can handle large volumes of data with enhanced automation. AI can aid in rational drug design, assist in decision making; determine the right therapy for a patient, including personalized medicines; and manage the clinical data generated and use it for future drug development.AI appears to be transforming the future of healthcare field but still has to make impactful outcome. AI can upgrade and expedite research and development efforts, diminish the time and expense of early drug discovery, and support to predict potential toxicity risks/side effects at late-stage trials that could be very valuable in avoiding dreadful events in clinical trials.

Keywords:Artificial intelligence, computer-aided design, personalised therapies, drug discovery and development, advancement, clinical trials.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OCOG25

Development, Optimization, and *Invitro* Evaluation of Novel Fast Dissolving Oral Films (FDOF's) of *Uncariatomentosa* extract to treat Osteoarthritis

J. Naga Sowjanya

Research scholar, Osmania University, Hyderabad

Fast dissolving oral films are popular dosage forms which when placed in the oral cavity would disintegrate rapidly and dissolve to release the medication for improving oral absorption. Traditionally *Uncariatomentosa* plant is used in the treatment of rheumatoid arthritis, can be used in low dose as analgesic and anti-inflammatory agent in Rheumatoid Arthritis. No literature is available on formulation of plant for indication of Osteoarthritis which is considered to be novel. This study aims to formulate fast oral dissolving film(FDOFs) bark extract to be utilized in treatment of osteoarthritis. About 14 formulations were prepared using standard BoxBehnkendesign protocol for optimization using the natural film formers, synthetic polymers, super disintegrants, plasticizers as independent variables with folding endurance and disintegration time as dependent variablesby solvent casting method. Further the formulation characteristics including physical and mechanical behaviour of films and drug release behaviour was evaluated. The investigation has proved that the oral dissolving films of extract with Pullalan gum, HPMC (polymers), Propelyne glycol, PEG 400 (Co-solvents) and Crosscarmellose sodium (super disintegrant) are stable and uniform with formulation characteristics. The drug release rates have proven that F5 and F13 formulations showed 99.90% drug release within 30 minutes following first order kinetics with satisfactory mechanical properties. The study results suggest that the fast dissolving oral films of *Uncariatomentosa* extractis novel, attractive and alternative to the available marketed products resulting in improved patient adherence in treatment of osteoarthritis.

Keywords: Fast dissolving oral films, Uncariatomentosa, Osteoarthritis, solvent casting method, Patient adherence.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPC-1

NOVEL DERIVATIVES OF EUGENOL AS A NEW CLASS OF PPARΓ AGONISTS IN TREATING INFLAMMATION: DESIGN, SYNTHESIS, ANALYSIS, PPARΓ PROTEIN BINDING ASSAY AND COMPUTATIONAL STUDIES

Noor Fathima Anjum[1], B.R. Prashantha Kumar*[1], Madhusudan N. Purohit[1]

[1]*Department of Pharmaceutical Chemistry, JSS College of Pharmacy, JSS Academy of Higher Education & Research, Mysuru 570 015, India.*

Eugenol is a pharmacologically active substance found in plant essential oils. Eugenol inhibits proinflammatory mediators including interleukins IL-1β and IL-6, tumor necrosis factor-alpha (TNF-α), and prostaglandin E2 (PGE2), inducible expression of oxide nitric synthase (iNOS) and activation of cyclooxygenase-2 (COX-2), nuclear factor kappa B (NF-κB), leukotriene C4 and 5-lipoxygenase (5-LOX). In this perspective, our study focuses on the design of novel eugenol derivatives as potent anti-inflammatory agents via ppar gamma agonism. In addition, Lipinski's rule of 5 was carried out to find out the oral bioavailability of the compounds. Further, the compounds were screened for *in-vitro*anti-inflammatory activity by albumin denaturation assay.The pharmacokinetics disclosed that newly synthesized compounds **1a-f**obey Lipinski's rule and show promising drug scores. The docked structures at the binding sites were found to be stable using Molecular Dynamics simulations. The average RMSD of the Cα atoms of Peroxisome Proliferator-activated Receptor (PPAR) gamma and heavy atoms of **1d** and **1f**was found to be 1.722 ± 0.07966 and 1.373 ± 0.03305 Å, respectively. In contrast, the standard drug Pioglitazone with Peroxisome Proliferator-activated Receptor (PPAR) gamma complex had an average RMSD of 2.440 ± 0.07039 Å. Similarly, analysis of lysozyme bound complex RMSD is 1.518± 0.1071Å, 1.447±0.07017 Å, and 2.268±0.04858 Åof **1e**,**1f**, and standard drug (Diclofenac) respectively. Hence, a conformational change in the compounds has a direct influence on biological activity. The Rg values for protein-ligand complexes: Peroxisome Proliferator-activated Receptor (PPAR) gamma**1f** and Pioglitazone show fluctuations between 18.65 Å to 18.8 Å. However, deviations are slightly less for **1d** ranging from 18.8 Å to 18.9 Å. Overall, Peroxisome Proliferator-activated Receptor (PPAR) gamma**1f** complex shows fewerdeviations with time-dependent parameter analysis and the **1f** lysozyme complex shows best in anti-inflammatory activity. We reported a simple, yet efficient method to synthesize some eugenol derivatives using substituted aromatic amines and characterized themusing spectroscopic techniques (FTIR, ^{1}HNMR, ^{13}CNMR, and Mass spectrometry).

Key words:Eugenol derivatives, peroxisome proliferator-activated receptor gamma (PPARγ), docking, molecular dynamics, and anti-inflammatory activity.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPC-2

COMPUTER AIDED DRUG DESIGN AND SYNTHESIS OF BISCHIFF BASES OF COUMARIN-IMIDAZOLE HYBRIDS AS A MULTI TARGET INHIBITOR

S. Apoorva*, Dr. S. Anitha

University College of Technology-OU, Hyderabad, Telangana, India.

New drug development has been recognized as a complicated, time-consuming, expensive and challenging process. For the process of drug discovery over 2.7 USD and nearly around 12-15 years of time is demanded through the conventional or traditional method of new drug discovery. Hence, to reduce the research cost and time, also to speed-up the process of new drug development, pharmaceutical industry is phasing new challenges. In order to answer these questions, computer aided drug discovery has been found to be the most promising, emerging, faster technology and cost-effective tool. Here in this study is to inculcate these ideas of drug discovery for the treatment of various leading ailments, such as cancer, tuberculosis, fungal infections, viral infections and bacterial infections. From time immemorial heterocyclic compounds have been found to be the promising agents in the treatment of above-mentioned problems. Among all the heterocyclics, imidazoles and coumarins were found to be the most desirable compounds for drug discovery due to various advantages like, their availability, application, uses, easy synthesis etc. Coumarin and imidazole were linked by incorporating a bischiff base to bring in the novel and functional pharmacophore. Accordingly, this investigation deals with the prediction of ADMET properties, *In-silico*molecular docking studies and prediction of biological activities for the desirable compounds optimized by using computational tools. Further the potent compounds were synthesized, characterized and screened for the biological activity.

Key words: Novel Drugs, Coumarin, Imidazole, Bischiffbase, ADMET, Anticancer activity.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPC-3

MEDICINAL VALUE OF CHALCONES; SYNTHESIS AND BIOLOGICAL EVALUATION OF SOME NEW CHALCONES

Dr.ShaikKhadarYazdan

Associate Professor, ChebroluHanumaiah Institute of Pharmaceutical Sciences, Chandramoulipuram, Chowdavaram, Guntur – 522019, Andhra Pradesh.

Chalcones (Maayan*et al*, 2005),a group of compounds with two aromatic rings connected by a keto-vinyl chain, constitute an important class of naturally occurring as flavonoids exhibiting a wide spectrum of biological activities. Chalcones showed antihypertensive, anti filarial, antimicrobial, antiprotozoal, anti HIV, anti malarial, anti-inflammatory, antioxidant, antiviral, anticonvulsant, anticancer and anti fungal activities. Chalcones can be prepared by Claisen-Schmidt condensation of 2-acetyl-5-bromofuran with various substituted aromatic/ hetero aromatic aldehydes, when stirred in ethanol manually at room temperature and kept in an aqueous solution of 50% potassium hydroxide. The synthesized chalcones were purified by recrystallization and column chromatography. The characterization of the purified chalcones was made by IR, 1H NMR and elemental analysis data. The antibacterial activity of these chalcones against selected gram positive and gram negative bacteria showed at both 50 µg and 100 µg levels but the zones of inhibition not higher than the standard. Three chalcones, which contain 4'-fluorophenyl, 3',4',5'-trimethoxyphenyl and 4'-pyridinyl rings, showed potent anti fungal activity against two species of fungi and the other chalcones showed less potent than standard drug fluconazole.Amongthechalconestestedforanti-inflammatoryactivity,seven compounds shown highest percent inhibition at 6^{th}hour and is comparable to that produced by the standard drug aceclofenac, but not at an identical dose level. The other chalcones also produced considerable anti-inflammatory effect at 3^{rd} and 4^{th} hour.

Key words:Chalcones, Claisen-Schmidt condensation, IR, 1H NMR, anti-inflammatory effect.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPC-4

AN EMERGENCY LIFE SAVING DRUG FOR SNAKE ENVENOMATION

Navanita SK,KalakotlaShanker, VVS Narayana Reddy Karri, PrakashYoganandam

JSS College of Pharmacy, Ooty.

Snake bite also known as snake envenomation is an injury caused because of a bite by snake and it can be life threatening if the snake is found to be venomous. In addition to vomiting, blurred vision, tingling in the limbs, and sweating, Bleeding, kidney failure, severe allergic reaction, tissue death, and breathing issues are all indications of chronic conditions. Snakebites are indeed a significant health, social, and economic threat in many parts of the world, particularly in tropical and subtropical nations. The agriculture sector presents the greatest occupational risk. High mortality is largely caused by inadequate health care, challenging transportation, and delays in administering anti-snake venom, particularly in remote areas. The most frequent sources of bites are venomous species from the families Elapidae and Viperidae. The most prevalent fatal snakes in India are the Indian spectacled cobra (*Najanaja*), common krait (*Bungaruscaeruleus*), Russell's viper (*Daboiarusselii*), and saw-scaled viper (*Echiscarinatus*). For preliminary docking studies we have targeted α-Bungarotoxin (PDB ID: 1KL8) and α-cobratoxin(PDB ID: 4AEA) using 85 ligands which comprises of active constituents from selected 10 plants**.** The maximum docking score for α-Bungarotoxin was found to be -6.52 by mauritianin from *Acalyphaindica*and α-cobratoxin exhibited -9.47 by saponarin from *Enicostemmalittorale.*In order to facilitate anti-snake envenomation activity, it is necessary to find a safe, conveniently accessible, affordable alternative without adverse effects. Based on the preliminary docking studies we are going to develop a formulation through a buccal route of administration.

Key words: Snake Envenomation, Najanaja, Bungaruscaeruleus, Daboiarusselii, Echiscarinatus, Herbal, Marine, Docking.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPC-6

SYNTHESIS, CHARACTERIZATION, MOLECULAR DOCKING, AND PHARMACOLOGICAL EVALUATION OF NOVEL SUBSTITUTED 3-ALKYL AMINO QUINAZOLINE 4-(3H)-ONE DERIVATIVE.

Shweta Gupta [1]*, Pawan Kumar Gupta[1], S.D. Singh[1], S.B. Tiwari[1]

Department of Pharmacy, Mahatma JyotibaPhuleRohilkhand University, Bareilly -243006, Uttar Pradesh

Quinazoline derivatives are classified as N-containing heterocyclic compounds. A novel series of 3-alkyl Amino Quinazoline 4-(3H) one derivatives was prepared by a methodical and facile method. Substitution of phenyl group at 2nd position in the novel quinazoline derivative ring system for exceeding Analgesic activity, Anti-anxiety activity, and Antibacterial activity.Synthesis of novel Substituted 3-alkyl Amino Quinazoline 4- (3H)- one derivatives were synthesized where Intermediate I (2-amino-N-(2 aminoethylbenzamide) and intermediate II {3-(2-aminoethyl)-2-(chloromethyl)quinazoline-4(3H)-one)} were the two intermediates formed during the synthesis of novel molecules and total twelve compounds (I_1, I_2, I_3, I_4, I_{17}, I_{18}, I_{19}, I_{20}, I_{21}, I_{22}, I_{23}, and I_{24}) were derived and was evaluated for Analgesic activity, Anti-anxiety activity, and Anti-bacterial activity.
Twelve different compounds (**I_1, I_2, I_3, I_4, I_{17}, I_{18}, I_{19}, I_{20}, I_{21}, I_{22}, I_{23}, and I_{24}**) were produced from a sequence of new substituted 3-alkyl amino quinoline 4- (3H)- one derivatives. The newly synthesised substance's chemical structure could be verified utilising the FT-IR (functional groups), 1 HNMR (hydrogen atomic position), 13 CNMR (carbon atomic position), LC-MS (mass determination), UV (compound purity), and elemental analysis. Utilizing tools such as auto dock Vina 1.5.7, Pmv-1.5.7, and Discovery Studio 2021, molecular docking was carried out and assessed for acute toxicity, analgesic action, anti-anxiety activity, and antibacterial activity.Analytical and statistical verification were performed on each molecule that was produced**.**Binding energy and RMSD value were calculated with respect to ligand-receptor interaction with the aid of various docking softwares. Two intermediates were formed during the synthetic scheme. Six compounds (**I_1,I_2,I_4,I_{18},I_{20} and I_{21}**) were slightly more potent than the reference standard diclofenac sodium also emerged as the most active of the series and eight compounds(**I_1,I_2,I_3,I_4,I_{18},I_{19},I_{20} andI_{21}**) showed analgesic activity out of twelve compounds (**I_1,I_2,I_3,I_4,I_{17},I_{18},I_{19},I_{20},I_{21},I_{22},I_{23}andI_{24}**). Ten compounds **(I_1,I_3,I_4,I_{17},I_{19},I_{20},I_{21},I_{22},I_{23} and I_{24})** showed anti-anxiety activity of which five compounds (**I_3,I_{17},I_{19}, I_{23} and I_{24}**) were more potent than the reference standard diazepam. Intriguingly, when compared to amoxicillin, the test compounds demonstrated potent anti-bacterial activity. The absence of toxic symptoms or fatality rates in compounds assessed for acute toxicity 24 hours after ingestion suggests their high safety margin.

Key words: Quinazolinederivatives , Molecular docking , Analgesic activity , Anti-Anxiety activity , Anti-bacterial activity.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPC-7

SYNTHESIS OF SUBSTITUTED ISOXAZOLE DERIVATIVES AS NOVEL ANTICANCER AGENT

S. A. Waghmare[*1], R. L. Sawant[1]

1Department of Pharmaceutical Chemistry, Dr.VithalraoVikhePatil Foundation's, College of Pharmacy, Ahmednagar414111,Maharashtra, India.

Heterocyclic derivatives have always played vital role in the area of medicinal chemistry. More than 85 % of drugs contain heterocycles as core scaffold. The increasing presence of various heterocycles in drugs is related to advances in synthetic methodologies, such as metal-catalysed cross-coupling and hetero-coupling reactions, that allow rapid access to a wide variety of functionalized heterocycles.Isoxazole is one of the popular heterocycle in different marketed antibiotics like Cloxacillin, Dicloxacillin , Sulfisoxazole, Sulfamethoxazole, Valdecoxib, Antipyrine, Dipyrone, .Anticancer drug containing isoxazole drug is Acivicin ,Antipsychotic – Risperidone , Anti TB- Cycloserine etc. **Chemistryand Methodology:** In this work synthesis of some substituted isoxazole has carried out from alpha beta unsaturated intermediate by using equimolecular quantity of reagent with hydroxylamine hydrochloride. **Result:** Compounds were obtained in moderate to good yield. Spectroscopic data such as IR, NMR, Mass supports the formation of compounds. compounds were shown good anticancer activity. compound 7 shows TG50 of 3.87 µg/ml which is much near to standard drug Doxorubicin. **Conclusion**: Some derivatives were successfully synthesized and possess good anticancer potential and can be important molecule for potential anticancer research.

Key words :Heterocycles, Isoxazole, Anticancer activity.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPC-8

IN SILICO STUDY OF NATURAL BASED PERMEATION GLYCOPROTEIN INHIBITORS TO RIDE ON THE MULTI DRUG RESISTANCE EFFECT

Eknath D. Ahire*,Sanjay J. Kshirsagar

METs, Institute of Pharmacy, Bhujbal Knowledge City, Affiliated to SPPU, Adgoan, Nashik Maharashtra, India– 422003

In multidrugresistance the main problem with drug absorption and therapeutic response. The permeation glycoprotein (P-gp) efflux pump is primarily responsible for the efflux of P-gp substrate drug candidates, resulting in low bioavailability. There are several combinative drug approaches are available in the market for the inhibition of such kind of efflux pumps, but they had many side effects due to their therapeutic action and other metabolites produced by them. Therefore there is a need to discover natural base candidates. The purpose of this study was to increase the solubility and rate of bioavailability by studying the innovative candidates as P-gp influx pump inhibitors. In these study we have done the Insilco based docking investigation to assess their interactions. Selected different excipients was subjected for docking to summarise the docking scores, hydrogen bond, electrostatic bond and various decesive factors governing the protein ligand interaction. This report can be helpful further in designing in vitro and in vivo evaluations of the P-gp inhibition activity of taken excipients for the further formulation development.

Key words – Silico study, Natural, Permeation glycoprotein inhibitors,Multidrugresistanc.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPC-9

SYNTHESIS AND EVALUATION FOR ANTI-INFLAMMATORY & ANTICONVULSANT ACTIVITIES OF NOVEL 2-(N-PHENYL SUBSTITUTED)-3-ALKYL AMINO-QUINAZOLINE-4(3H)-ONE DERIVATIVES

Pawan Kumar Gupta[1*], Shweta Gupta[1], Dr S.B. Tiwari[1], Dr. S.D. Singh[1]

[1]*Department of Pharmacy, M.J.P. Rohilkhand University, Bareilly 243006 (India).*

The derivatives of novel 2-(N-phenyl substituted)-3-alkyl amino-quinazoline-4(3H)-one were synthesized by condensation of Isatoic anhydride with alkyl amine. Total 12 compounds (I5- I16) of the series of derivatives were synthesized by novel drug design approach. Autodockvina software was used for molecular docking. Binding energy and RMSD value were calculated with respect to ligand-receptor interaction. Two intermediates were formed during the synthetic scheme. Intermediate I (**2-amino-N-(2 aminoethyl) benzamide**) and intermediate II {**3-(2-aminoethyl)-2-(chloromethyl) quinazoline-4(3H)-one)**} were formed during the synthesis ofnovel molecules. Chemical structure of the novel synthesized compound were confirmed by FT-IR (functional groups), ^{1}HNMR (position of hydrogen), ^{13}CNMR (position of Carbon), LC-MS (mass determination), UV (Purity of compound) and elemental analysis. These novel synthesized derivatives were evaluated for anti-inflammatory activity with COX receptor. Paw oedema model used for this screening. Compound **I8, I10 and I14** shows highest anti-inflammatory activity and **I5, I9 and I15** moderate anti-inflammatory activity among all the novel synthesized derivatives due to presence of electron withdrawing groups. Further these synthesized novel quinazoline derivatives were evaluated for anticonvulsant activities with GABA receptor by using of MES method. Compound **I5, I6 and I14** showed maximum anti-inflammatory activity and compound **I8, I10 and I12** have moderate anticonvulsant activities.

Key words: Quinazoline derivatives, Molecular docking, Anti-inflammatory activity, Anticonvulsant activity.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPC-10

*IN-SILICO*GUIDED PHENOTHIAZINE LINKED TRIAZOLES AS EGFR INHIBITORS TARGETING CANCER

VivekPanwar, Deepak Kumar

Department of Pharmaceutical Chemistry, School of Pharmaceutical Sciences, Shoolini University, Solan (H.P)

Phenothiazinesandtriazoles independently are medicinal active scaffold with wide range of biological activites including cancer. So a library of phenothiazine sunstitutedtriazoles were designed using di-bromoalkanes as linkers. Varying sizes of di-bromoalkanes were used for the designing. EGFR is a cell surface receptor and is highly deregulated causing cancer. So, the best 3D-structure of the protein was retrieved, prepared and energy minimized. The chemical structures of the ligands were also prepared and minimized. Molecular docking is a computational tool that is useful in predicting the binding affinity of the ligand towards the receptor. So the energy mimized ligands were docked into the prepared protein structure and the binding affinity was compared with the standard drugs. Four ligands from the designed library were showing more binding affinity with better binding energies than the standard drugs. Thus, these ligands can be synthesized and evaluated *in-vitro/in-vivo* as potent EGFR Inhibitors in future.

Key words: Phenothiazines, Triazoles, Linkers, Molecular Docking.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPC-11

DESIGN, SYNTHESIS, MOLECULAR DOCKING AND INVITRO ANTICANCER AND ANTIBACTERIALEVALUATIONOF NOVEL PYRAZOLELINKEDWITH QUINAZOLINESCAFFOLDS

Mohd Afroz[1*], G Shiva kumar[2]

[1*]*Research Scholar GITAM School of Pharmacy, GITAM (Deemed to be university), Sangareddy, Telangana-502329 India*

[2]*Professor GITAM School of Pharmacy, GITAM (Deemed to be university),Sangareddy, Telangana-502329 India*

A novel series of compounds are synthesized 2-(3,5-diphenyl-4,5-dihydro-1H-pyrazol-1-yl)-N-(2-methyl-4-oxoquinazolin-3(4H)-yl)-2-oxoacetamide. All the synthesized compound are characterized by spectral analysis ^{1}H NMR, ^{13}C NMR, IR, MASS. All the synthesized compound were screened invitro anti-cancer and anti-bacterial activity. Among the series of compound 3d and 3e exhibit more potent againstthree cancer cell lines MCF7, PC-3, HT-29. IC_{50}(µM) 3d (16.52, 13.24, 10.15µg/ml) 3e (17.28, 15.26, 12.33µg/ml) with standard drugs doxorubicin(15.29, 12.26, 9.06µg/ml) and 5-fluorouracil(16.15, 13.73, 10.25 µg/ml). And also screened antibacterial activity 3d, 3e, 3j, 3k scaffolds exhibit a promising activity with standard drug ciprofloxacin. Insilico molecular docking analysis are performed and it is predicted a good binding affinity against with 5C5S, 6XXN, 3K46 protein.

Key words: Pyrazole, Quinazoline, Anti-cancer, Anti-bacterial, Molecular docking.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPC-12

IDENTIFICATION OF LEISHMANIALPROLYLAMINOPEPTIDASE SPECIFIC INHIBITORS EMPLOYING IN SILICO&IN VITRO APPROACHES

Janish Kumar[a], PeddapakaJagruthi[b], Mohammed Arifuddin[b]&Insaf Ahmed Qureshi[a]

[a]*Department of Biotechnology & Bioinformatics, School of Life Sciences, University of Hyderabad, Prof. C.R. Rao Road, Hyderabad 500046, India*

[b]*Department of Medicinal Chemistry, National Institute of Pharmaceutical Education and Research (NIPER), Hyderabad 500037, India*

Visceral leishmaniasis (kala-azar), caused by the protozoan parasite *Leishmaniadonovani*, is the second largest parasitic killer in the world after malaria. The scarcity of effective vaccines, limitations of safe frontline drugs, and the appearance of drug resistance limit the treatment. Aminopeptidases are exopeptidases that play a crucial role in numerous biological processes, mainly protein catabolism. Prolylaminopeptidase (PAP) is a metallopeptidase that precisely catalyzes the removal of amino acid from N-terminal peptide substrates with a proline at the P^1 position.*Prolylaminopeptidase is known as a validated drug target in many diseases like malaria, toxoplasmosis etc., however this enzyme is uncharacterized in trypanosomatid parasitesregardless showing*notable sequence divergence from its human counterpart. *In our study, LeishmaniadonovaniPAP (LdPAP) was cloned and expressed in bacterial expression system followed by purification using* affinity chromatography. Theenzymatic activity of purified protein was assesed with synthetic substrate, and *it was* found to be active with requisite of divalent metal ions, particularly Zn(II). The quinoline-carbaldehyde derivatives were screened against *Ld*PAP, where two compounds showed higher potency against leishmanial PAP than its human ortholog. Remarkably, both compounds were observed to inhibit *Ld*PAP competitively, while surface plasmon resonance revealed that these compounds have more binding affinity towards *Ld*PAP than human PAP. Furthermore, three-dimensional structure of *Ld*PAP was generated followed by docking with substrate and inhibitors. Molecular docking studies delineated the binding of lead molecules into the substrate binding site of *Ld*PAP with high affinity with molecular dynamics simulation anlysis exhibiting more stability for these complexes in comparision to its apo form.

Key words:Aminopeptidases,Leishmaniadonovani,LdPAP.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPC-13

INHIBITION OF XANTHINE OXIDASE BY 1-*O*-METHYL CHRYSOPHANOL, A HYDROXYANTHRAQUINONE ISOLATED FROM *AMYCOLATOPSISTHERMOFLAVA*ICTA 103

Uma Rajeswari B[1], Joshna Rani Surapaneni[1], R S Prakasham[2]

[a]*Department of pharmaceutics, Institute of Pharmaceutical Technology, Sri PadmavathiMahilaViswavidyalayam, Tirupati-517502, India.*

[2]*Organic Synthesis and Process Chemistry, CSIR-Indian Institute of Chemical Technology, Hyderabad- 500007.*

Hyperuricemia caused by elevated levels of serum uric acid is responsible for implication of gout and other associated disorders that influence the human health. So far, Xanthine oxidase (XO) inhibitors are the choice of first line drugs for the treatment of hyperuricemia. The objective of the present study was to isolate a potent XO inhibitor from the actinobacteria and to evaluate its inhibitory mechanism. Initially, XO was isolated from bovine milk using standard protocol and enzyme kinetics were evaluated. Thereafter, culture filtrates of actinobacteria (*Amycolatopsisthermoflava* ICTA 103), *Streptomyces luteireticuli* ICTA 16, *Streptomyces kurssanovii*ICTA165 and *Amycolatopsislurida*ICTA194) were screened for XO inhibition using *in vitro* qualitative NBT plate assay followed by extraction and purification of potent inhibitor 1-*O*-methyl chrysophanol (OMC), from the culture filtrate of *Amycolatopsisthermoflava* ICTA 103, which belongs to hydroxyanthraquinones (HAQ) family. Further, *in silico*molecular docking studies were performed to study the binding affinity of OMC with XO followed by quantitative *in vitro* spectroscopic assays. The docking study explored the strong binding interaction between OMC and XO and the results were corroborates with the *in vitro* kinetic study. The *in vitro* results revealed the significant XO inhibition potential of OMC with an IC_{50} and K_i value of 24.8 ±0.072 µM & 2.218±0.3068 µM respectively. These results are comparable to standard allopurinol, however, more significant than its structural analog, chrysophanol. The kinetic analysis revealed that OMC is a reversible slow binding inhibitor and the Lineweaver - Burkplot analysis showed mixed type inhibition of OMC against XO. These results are in agreement with chrysophanol. Findings of this study proposed a new derivative of HAQ in the pipeline of hyperuricemia therapeutic drug candidates.

Key words:Hyperuricemia, Xanthine oxidase, Amycolatopsisthermoflava ICTA 103, 1-O-methyl chrysophanol, Lineweaver-Burkplot, Chrysophanol.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPA-1

IMPLEMENTATION OF CENTRAL COMPOSITE DESIGN FOR OPTIMIZING A METHOD FOR THE VALIDATION OF SITAGLIPTIN AND ERTUGLIFLOZIN IN BULK AND PHARMACEUTICAL FORMULATION BY RP-HPLC METHOD

***Snigdha Rani Behera**[1*, 3], Dr.Biplab Kumar Dey[1], Dr.SrutiRanjan Mishra[2]

[1*]*Research Scholar, Faculty of Pharmaceutical Science,Assam down Town University, Panikhaiti, Guwahati-26, Assam.*
[1]*Faculty of Pharmaceutical Science,Assam down Town University, Panikhaiti, Guwahati-26, Assam.*
[2]*Department of Pharmaceutical Technology, Danteswari College of Pharmacy, Jagdalpur, Chhattisgarh.*
[3]*School of Pharmacy, ARKA JAIN University, Jamshedpur, Jharkhand.*

The present work aims to explain the steps of quality by design (QbD) concept to optimize a method for the validation of Sitagliptin (SITG) and Ertugliflozin (ERTU) in a combined dosage form by RP-HPLC method for identification of variables affecting the method performance. Central composite design (CCD) was used to screen variables and optimize chromatographic conditions while building the design space using trial version 11 of Design-Expert software 2017. ANOVA made for 2k Factorial outline shows that arch is significant for all the responses (K1, RS (1, 2) and α (1, 2), tR2) and the p-value was under 0.05. This infers a quadratic model (for retention time and capacity factor) and additionally a cubic model (for resolution and separation). Keeping in mind the end goal to get second request prescient model, CCD is utilized, which is an outline under response surface methodology (RSM). CCD is picked because of its adaptability and can be connected to upgrade a RP-HPLC separation for the simultaneous estimation of Sitagliptin and Ertugliflozin. The Chromatographic separation was attained isocratically on a C-18 column by using MeOH, ACN, 0.01mM KH_2PO_4 at pH 3 ± 0.5 (43.171:10:46.829 %v/v/v. Flow rate of 0.5ml/min. The wavelength of the detector was set to 225 nm. The developed method can be used on a regular basis to analyze the fixed dose combination of Sitagliptin and Ertugliflozin.

Key words: QbD, RP-HPLC, Design-Expert, p-value, CCD.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPA-2

A TECHNIQUE EXPANDING THE LIMITS OF STRUCTURE ELUCIDATION: LC-NMR

N.Prathyusha

St. Pauls college of Pharmacy, Turkyamjal, Hyderabad

LC-NMR[Liquid chromatography nano magnetic resonance] is an efficient analytical technique for the identification of components in pharmaceutical mixtures. To increase its efficiency it can be further combined with MS. There are various NMR probes that can be used for increasing the efficiency of LC-NMR.The two online detectors that are complementary to each other and equally provides the structural identification of known expected components as well as unknown substances. The use of LC-NMR techniques is lowered due to its major drawback of lower sensitivity. However new upcoming challenges in the future can be solved by using this technique, due to the development of the new cryogenic LC-NMR probes which coupled with the recent interface enhancement and higher magnetic field strengths.

Key words: LC-NMR, LC-NMR Coupling, NMR probes.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPA-3

UPLC-TANDEM MASS SPECTROMETRY METHOD -APPLICATION IN PHARMACOKINETIC STUDY IN RATS

MuruganNithya

St. Pauls college of Pharmacy, Turkyamjal, Hyderabad

LC-MS/MS is widespread due to its high sensitivity and selectivity. This method is most capable of quantifying various drug metabolites in plasma so that they have many applications in pharmaceutical and drug development processes. The aim of this is to validate UPLC-MS/MS assay method for simultaneous extraction separation and quantification of cited drugs. We employed different methods including chromatographic separation and quantification of metabolites in rat plasma for pharmacokinetic analysis. We developed UPLC-Tandem mass spectrometry method and validated it using pharmacokinetic study in rats for selected drugs therefore the method can be applied for future pharmacokinetic evaluation. Short run time as well as simplicity of sample preparation and wide range of calibration curve allow this method for monitoring and clinical studies.

Key words: LC-MS/MS ,UPLC-Tandem mass spectrometry , Pharmacokinetic evaluation.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPA-5

APPLICATION OF GRAVIMETRIC TECHNIQUE TOWARDS PHARMACEUTICAL PRODUCTS

Dr.K.Bhavyasri *, B.Srilatha, Ch. Swathi, G.Vaishnavi, Dr.MogaliSumakanth

Department of Pharmaceutical Analysis,RBVRR Women's College of Pharmacy, Barkatpura, Hyd, India, Pincode:500027

Gravimetric analysis is a method in analytical chemistry used for the quantitative determination of an analyte (the ion being analyzed) based on its mass. Gravimetric analyses depend on comparing the masses of two compounds containing the analyte. The four main types of this method of analysis are precipitation, volatilization, electro-analytical and miscellaneous physical method. The methods involve changing the phase of the analyte to separate it in its pure form from the original mixture and are quantitative measurements.

A simple, rapid and cost effective gravimetric method was develop for the quantitative analysis of Diclofenac in its different pharmaceutical formulation. Diclofenac is precipitated by complex formation of Copper(II)-Diclofenac complex. The percentage recovery value for Diclofenac for proposed method of tablets, injectables, ointments was 98.6%, 99.3%, 97.98%.

Key words:Gravimetry, Diclophenac, Recovery, Accuracy, complex formation.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPA-6

DEVELOPMENT AND VALIDATION OF RP- HPLC METHOD FOR THE SIMULTANEOUS ESTIMATION OF REMDESIVIR AND BARICITINIB USING QUALITY BY DESIGN APPROACH AND ITS APPLICATION TO STABILITY STUDIES

Mrs.K.Keerthi

St. Pauls college of Pharmacy, Turkyamjal, Hyderabad

A simple, Accurate, precise, stability indicating method was developed for the simultaneous estimation of the Remdesivir and Baricitinib. Retention times of Remdesivir and Baricitinib were found to be 4.72 min and 7.52 min. For the method development Remdesivir and Baricitinib lot of trails was performed and finally we optimized the method by using methanol and water (80:20) the flow rate was 0.8 ml/min. Then Grace C18 (250mm * 4.6 ID , Particle size :5 micron) used as stationary phase. The detection wave length was 239 nm . The temperature ambient inject volume 10 micro meter. The developed method was further goes for method validation as per ICH guidelines. The accuracy parameter result was formed to before Remdesivir and Baricitinib standard deviation less than 2%. The repeatability parameter result was formed to be for Remdesivir this much 0.08% and from Baricitinib 0.28%. The intermediate precision parameter result was formed to be for Remdesivir this much 0.11% and from Baricitinib 0.21%. The detection limit parameter result was formed to be for Remdesivirthis much 0.014ppm and from Baricitinib 0.071 ppm. The quantization limit parameter result was formed to be for Remdesivir this much 0.0.043ppm and from Baricitinib 0.215 ppm. The linearity parameter (R 2) result was formed to be for Remdesivir this much 0.999 and from Baricitinib 0.998. Retention times are decreased and that run time was decreased so the method developed was simple and economical that can be adopted in regular Quality control test in Industries.

Key words: Remdesivir, Baricitinib, RP-HPLC, Method Development, ICH, Validation.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPA-7

DEVELOPMENT AND VALIDATION OF STABILITY INDICATING METHOD FOR BISOPROLOL WITH CHARACTERIZATION OF DEGRADATION PRODUCT BY MASS SPECTROMETRY AND PREDICTION OF THE TOXICITY OF THE CHARACTERIZED DEGRADATION PRODUCTS

KavitaChandramore

METs, Institute of Pharmacy, Bhujbal Knowledge City

Bisoprolol was subjected to forced degradation studies under conditions of hydrolysis (acid and base), photolysis, oxidation, and thermal stress. The drug showed liability in hydrolytic, oxidative and thermal conditions, resulting in a total of four degradation products.In HPLC analysis, the degradation products were separated from the analytes using a mobile phase made up of a combination of acetonitrile and phosphate buffer (20 mM, pH 8) (60:40 v/v) passing through an ODS C_{18} (250 mm 4.6 mm, 5 m particle size) column. The method was linear over a range of 06–14 µg/mL concentration. The detection was carried out at274 nm. The method was validated for linearity, range, precision, accuracy, specificity, selectivity and intermediate precision. In order to characterize the degradation product, initially mass fragmentation pathway of the drug was established with the help of mass spectrometry. Lastly, toxicity prediction by toxic hazard estimation by decision tree approachsoftware were employed to assess in-silico toxicity of the characterized degradation products.

Key words:Force degradation study, stability indicating method, method validation, mass spectrometry, in-silico toxicity.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPA-8

DEVELOPMENT AND VALIDATION OF A BIOANALYTICAL METHOD FOR THE QUANTIFICATION OF RIBOCICLIB IN SPIKED HUMAN PLASMA USING HPLC-PDA

RakeshU.Shelke*, Dinesh D.Rishipathak[1]

Department of Pharmaceutical Chemistry,Bhujbal Knowledge City, MET's Institute of Pharmacy, Affilated to SavitribaiPhule Pune University,Adgaon, Nashik, Maharashtra, India- 422003

A sensitive and accurate high performance liquid chromatography with ultraviolet/visible light detection (HPLC-UV) method for the quantification Ribociclib in Spiked Human Plasma by HPLC-UV was developed and validated. RCB and the IS, Trifluridine, were extracted from plasma samples by a simple Protein Precipitation extraction using Acetonitrile. Plasma concentration of RCB and internal standard were analyzed by reversed phase chromatography using Orochemorosil C18 (4.6 mm × 250 mm, 5µ) a and elution with a isocratic mobile phase consisted of 10 mM phosphate buffer - Acetonitrile (60:40, v/v) adjusted to pH 3.0 at a flow rate of 1.0 ml/min. Detection of RCB and the IS was done at a wavelength of 260 nm. The limit of quantification was 10 ng/ml. The calibration curve was linear (R2 >0.998) over the concentration range of 10–1000 ng/ml. For human plasma, the accuracy and precision were within ±15% and ≤15%, respectively, for all concentrations, except for the lower limit of quantification, where they were within ≤20%.

Key words: Bioanalytical methods, Protein Precipitation, Validation, Spiked Human Plasma.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPA-9

ANALYTICAL METHOD VALIDATION OF COMBINATION DRUG METFORMIN AND SITAGLIPTIN AND IMPURITIES STUDIES

Deepak. M, VijeyAanandhi M*

Department of Pharmaceutical Chemistry and Analysis, School of Pharmaceutical Sciences, Vels Institute of Science, Technology and Advanced Studies (VISTAS), Pallavaram, Chennai, Tamil Nadu, India. Pin code- 600117

An overview about simultaneous estimation of the combination drugs, metformin and sitagliptin using RP-HPLC method. Reverse phase chromatography is the most commonly used separation technique in HPLC, common reasons being its simplicity, versatility and its ability to handle compounds of a diverse polarity and molecular mass. Good knowledge about different types of mobile phases and their combination are required for highly precise and accurate method development. The retention time and linearity of metformin and sitagliptin are found to be determined under different chromatographic conditions such as column, mobile phase, elution mode, flow rate and wavelength detected using UV detector. In this article, we will be reviewing different developed methods for estimating the given combination drugs by RP-HPLC along with imurities studies.

Key words: Metformin hydrochloride, Sitagliptin Phosphate, HPLC, Chromatographic conditions, Retention Time, Linearity and Impurities.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPA-10

BIOANALYTICAL METHOD DEVELOPMENT AND VALIDATON OF ARTEMETHER AND DIHYDROARTIMISININ USING HPLC- MS IN HUMAN PLASMA.

Syed Sara Afreen

GokarajuRangarajucollege of pharmacy, Hyderabad

The investigation is aimed to develop suitableBio analytical method of estimation of Artemether and Dihydroartemisinin using HIGH PERFORMANCE LIQUID CHROMATOGRAPHY MASS SPECTROSCOPY IN HUMAN PLASMA in positive ion mode and validate its parameters using Artemether D3 and Dihydroartemisinin-13C-D4 as internal standards (IS).Sample preparation was accomplished by liquid- liquid extraction technique. The reconstituted samples were chromatographed on Kromasil, 100 x 4.6 mm, 5µm, C18 (Make: AkzoNobel) column using a mobile phase consisting of HPLC grade methanol: 5mM ammonium formate buffer (90:10, v/v).The flowrate is0.700 ml/min, Injection volume 10 µL, Run time is 6 min and the retention time is Artemether 4.5 ± 0.2 min, Artemether D3 4.50 ± 0.2 min. Dihydroartemisinin 2.50 ± 0.2 min, Dihydroartemisinin-13C-D4 2.50 ± 0.2 minutesThe method was validated over a concentration range of 2.000 ng/mL to 301.785 ng/mL for Artemether and 2.023 ng/mL to 305.224 ng/mL for Dihydroartemisinin respectively with the detection of Artemether m/z – 316.30 (parent) and 163.20 (product), Dihydroartemisinin m/z – 302.30 (parent) and 163.20 (product), Artemether D3 m/z – 319.30 (parent) and 163.20 (product) and Dihydroartemisinin-13C-D4 m/z – 307.30 (parent) and 168.20 (product) in positive ion mode.Validation parameters such as Selectivity, Carryover test,matrix effect, sensitivity, linearity precision and accuracy,stabilities,recovery,dilution integrity, run size evaluation and concomitant drug effects are performed and the results obeyed all the evaluation parameters of ICH guidelines" bioanalytical method validation". The developed analytical method will have applications in bio equivalence studies, pharmacodynamics pharmacokinetics, toxicology, forensic studies and anti-doping in evaluation of studied drugs.

Key words: Bioanalytical method validation, Artemether, Dihydroartemisinin, ICH guidelines, Human plasma.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPA-11

VALIDATED STABILITY INDICATING FT-IR SPECTROSCOPIC METHOD FOR SIMULTANEOUS QUANTITATIVE ESTIMATION OF ACECLOFENAC AND PREGABALIN IN COMBINED TABLET DOSAGE FORM

S.S.Dange*1T.M. Kalyankar2, S. K. Shete3 M. B. Sawant2

St. Pauls college of Pharmacy, Turkyamjal, Hyderabad

The current study focused on FT-IR spectroscopic method development and validation for simultaneous estimation of aceclofenac (ACF) and pregabalin (PGL) in combined tablet dosage form.Aceclofenac and pregabalin are used in combination for the relief of pain and inflammation in rheumatoid arthritis, osteoarthritis, and ankylosing spondylitis and adjunctive treatment of partial seizure, epilepsy, fibromyalgia, neuropathin pain drug. Literature survey revealed that no method is reported on FTIR method for the simultaneous estimation of the aceclofenac&pregabalin in bulk and combined pharmaceutical dosage form.The method is validated with respect to linearity, precision, accuracy, robustness, ruggedness and system suitability parameters as per ICH guidelines. The developed method was applied to forced degradation studies successfully to verify the utility of the established procedure.

Key words:Aceclofenac, Pregabalin, Forced degradation studies, FT-IR, Validation and ICH.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPA-12

A REVIEW ON THREAT OF NITROSAMINE IMPURITIES IN PHARMACEUTICALS

G.Mounika[1], Gera Nissy Evengelin[2], K.Keerthi[3] T.Kavya[4]

Department of Pharmaceutical Analysis, St Pauls College of Pharmacy, Turkayamjal,Hyderabad, Osmania University,Hyderabad.

Nitrosamine impurities have been detected in various pharmaceutical products in recent days. Various sartans, ranitidine, nizatidine, and metformin have been recalled from the markets due to the high limit of nitrosamine impurities. This review aims to provide a brief overview of nitrosamine impurities, detection methods in detail, mechanism of action of nitrosamine impurities, sample preparation techniques, and regulatory limits. Numerous reported nitrosamine impurities also have been discussed with chemical structure. Various detection methods including LC-MS/MS, GC-MS-HS, and HPLC for nitrosamine impurities along with sartans, ranitidine, nizatidine, and metformin are being discussed in this review article. Various sample preparation techniques such as solid-phase extraction, liquid–liquid extraction, and rapid-fire techniques have also been discussed. This review will provide the detail information to the analytical manpower working in various quality control laboratories as well as in research organizations.

Key words:Nitrosamines, sartans, impurities, LC-MS/MS, GC-MS-HS.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP01

ASSESSMENT OF MEDICATION SAFETY ISSUES ASSOCIATED TO HIGH-ALERT MEDICATIONS USE IN INTENSIVE CARE SETTING: A CLINICAL PHARMACIST APPROACH

Priya J Aradhya[1], Sri Harsha Chalasani[2], Madhan Ramesh[3]

[1]*Research scholar (Ph.D.), Dept. of Pharmacy Practice, JSS College of Pharmacy, JSSAHER, Mysuru*
[2] *Assistant Professor, Dept. of Pharmacy Practice, JSS College of Pharmacy, JSSAHER, Mysuru*
[3] *Professor, Dept. of Pharmacy Practice, JSS College of Pharmacy, JSSAHER, Mysuru.*

High-alert medications (HAMs) potentiate heightened risk in causing patient harm ranging from 0.24 to 89.6 errors per 100 prescriptions. Despite the cautious use of these medications, the medication safety issues persists which compromises the patient safety. An interventional study was conducted in Intensive Care Units (ICUs) for a period of six months. The HAMs were adopted from the Institute for Safe Medication Practices list of HAMs were used. The NCC MERP classification was used to categorize the medication errors (MEs). The data were collected and assessed categorically.A total of 226 subjects were enrolled during the study period of which 116 (51%) were males and 110 (49%) were females. Majority [60 (26.55%)] of the study participants belonged to 61-70 years of age. A total of 292 medication errors were reported, of which [175 (60%)] errors were prescribing errors, followed by documentation errors [92 (31%)] and [25 (9%)] contributed to administration errors. Various class of drugs were implicated in the error, of which [131 (44.86%)] were caused by HAMs. Insulin, aspirin, tramadol and metoprolol were identified as most common HAMs to cause errors. According to NCC MERP classification, [199 (68%)] errors belonged to Category B, followed by Category C [69 (24%)]. Stress and workload were identified as the most common contributing factor to MEs.HAMs are crucially utilized in ICUs. While great strides have been adopted in error prevention, yet the goal of making HAM errors ‘never’ event has not been achieved. Thus, an active surveillance by clinical pharmacist could support the healthcare team in promoting patient care.

Key words: Medication error, High-alert medications, contributing factors, Patient safety.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP02

AN INTEGRATED STRATAGEM IN IDENTIFYING THE BARRIERS AND FACILITATORS IN THE REPORTED MEDICATION ERRORS

Ravina Ravi[1], Sri Harsha Chalasani[2], Madhan Ramesh[3]

[1] *Research Scholar (PhD), Department of Pharmacy Practice, JSS College of Pharmacy, JSSAHER, Mysuru*
[2]*Assisstant Professor, Department of Pharmacy Practice, JSS College of Pharmacy, JSSAHER, Mysuru*
[3]*Professor, Department of Pharmacy Practice, JSS College of Pharmacy, JSSAHER, Mysuru*

Error reporting should be a voluntary method that aids in reducing the effects of unfavourable mistakes and prevents future drug mistakes that could ultimately cause patient damage.The study aims at understanding the barriers and facilitators associated with voluntary-reporting of medication errors, for which a cross- sectional questionnaire based study design was adopted. A validated questionnaire was administered to the study centre housing 800 nurses, who work in three shifts across various specialities, of which 398 nursing staff consented to be included in the study. Data was collected by developing and circulating a Google form of the questionnaire amongst the nursing staff. A total of 398 nurses consented to participate in the study with 4.9% response rate. Of the total respondents, [383 (96.2%)] had good awareness of the existence of a medication error reporting system in the hospital, whereas [15 (3.85)] were unaware of the existence of a medication error reporting system in the study centre. It was statistically proven ($p>0.05$) that being new to the system of reporting medication errors, lack of supervision of inexperienced staff on how to handle medications and so on were the significant barriers responsible for reporting medication errors amongst the study participants. Professional encouragement, a "no-blame" culture, support and encouragement from the multi-disciplinary team are the facilitating factors observed, but none of these facilitators listed were statistically significant.Althoughit is unrealistic to eliminate all medication errors, the involvement of nursing staff in medication error reduction and prevention is absolutely essential.

Key words: Medication Error; Patient safety; Nurse; Facilitators; Barriers.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP03

PHARMACOVIGILANCE OF HERBAL SUPPLEMENTS: THE NEED OF THE HOUR

Safoora Aiman[1]

[1] *Dept. of Pharmacy Practice, St.Pauls College of Pharmacy, Turkayamjal, Rangareddy.*

Pharmacovigilance is defined as the science and activities relating to the detection, assessment, and prevention of adverse drug reactions in humans. In general, pharmacovigilance is the science of collecting, monitoring, appraising, and evaluating information from healthcare professionals and consumers on the deleterious effects of medications including herbal and traditional drugs. Herbal supplements are products obtained from plants and/or their oils, roots, seeds, berries or flowers and have been used for many centuries. Herbal formulations have attainedextensive acceptability as therapeutic agents, they are generally considered harmless since these belong to natural sources. This belief has led to large-scale self-medication by individualsacross the world, often leading to distressing outcomes, side-effects, or undesirable after-effects. There is an increasing awareness at various levels of the need to develop pharmacovigilance practices for herbal medicines. However, the present model of pharmacovigilance, its projects and associated tools have been developed with respect to standard medicines. Applying these methods to monitor the safety of herbal medicinal products provides new challenges due to the diverse nature, regulatory requirements and usage of these products. Introducing the importance of pharmacovigilance of herbal drugs at the academic level will better equip future healthcare professionals to be more vigilant in avoiding adverse drug reactions.

Key words:Pharmacovigilance, herbal drugs, natural, assessing, adverse effects.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP04

METFORMIN ASSOCIATED LACTIC ACIDOSIS (MALA) LED TO HYPERCARBIA, TACHYCARDIA, COMA AND DEATH

Mrs. S. Shruthi[1]

Assistant Professor, Department of Pharmacy Practice, G.Pulla Reddy College of Pharmacy.

Metformin associated lactic acidosis (MALA) is a condition in which there is increase in the plasma lactate levels by inhibiting mitochondrial respiration predominantly in the liver due to Metformin. Metformin is an oral hypoglycaemic agent belonging to biguanide class of Antidiabetic agents. Here I present a case of 47year old female patient with 82kgs body weight who was admitted to ER with chief complaints of SOB grade III sudden in onset and profuse sweating since 20 minutes. She was a k/c/o of Type II Diabetes Mellitus since 5 years and Hypothyroidism7years and was using Metformin 1000mg BD & Levothyroxine sodium 50mcg OD respectively. She had a PTCA in 2019, DES (Sirolimus) was placed. SpO2 on admission was 83%at RA, PR WAS 121 bpm, BP was 100/60mm Hg. Current lab data shows HbA1C 10.7%, FBS 187mg/dl, PLBS 232mg/dl. ABG showed PO_2 60mm Hg, PCO_2 is 70mmHg, pH 6.1, Chest X ray showed collapsed lung. It was diagnosed as lactic acidosis with severe hypercarbia/hypercapnea, tachycardia and hypotension. Patient was given O_2 support with 3lit O_2 and Inj. Sodium Bicarbonate 90mEq/L IV infusion. Suddenly within 2 hours of admission patient was unresponsive, GCS score was 8/15, patient was in coma and finally it was fatal. I conclude that Metformin caused acidosis which turned fatal to the patient.

Key words: Metformin, Mitochondrial respiration, Hypoglecemic, hypercarbia, coma, fatal.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP05

THREE DIMENSIONALORGAN PRINGTING

UmairSaleem*[1]Ms.SyedaAsraBanu

[1]*Sultan-Ul-Uloom College of Pharmacy, Hyderabad 500034,Telangana, Ranga Reddy.*

Three-dimensional (3D) bio printing is an emerging, ground breaking strategy in tissueengineering, allowing the fabrication of living constructs with an unprecedented degree of complexity and accuracy. We attempt to give a glimpse into how recent developments in 3D bio printing are going toimpact vast research ranging from complex and functional organ transplant to futuretoxicology studies and printed organ-like 3D spheroids. Organ printing Techniques, Printingmaterial &Type ofprintersrequiredarealsobeen discussed. Medical uses for 3 Dprinting, both actual andp otential, can be organized into several broadcategories, including: tissue and organ fabrication; creation of customized prosthetics, implants, and anatomical models; and pharmaceutical research regarding drug dosage forms delivery and discovery.

Key words: Organ priting, Drug discovery, Dosage form delivery.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP06

REPURPOSING OF INCRETIN HORMONESAS POSSIBLE THERAPEUTIC ALTERNATIVES FOR VARIOUS NEUROLOGICAL DISORDERS

Jincy Thomas[1], Geetha.K.M[2], B. Wilson[3]

[1] *Department of Pharmacology, College of Pharmaceutical Sciences, Dayananda Sagar University, Bengaluru*
[2]*Department of Pharmacology, College of Pharmaceutical Sciences, Dayananda Sagar University, Bengaluru*
[3]*Department of Pharmacology, College of Pharmaceutical Sciences, Dayananda Sagar University, Bengaluru*

The current study is an overview of the diverse therapeutic effects of glucagon-like peptide-1 agonists. A breakthrough in the study of neuronal regeneration involves the repositioning of dipeptidyl peptidase-4 inhibitors and glucagon-like peptide-1 receptor agonists, which enhances the bioavailability of glucagon-like peptide-1 and hence its neuroprotective attributes. Blood and the majority of tissues contain DPP-4, also known as CD26, a cell surface glycoprotein with peptidase activity.DPP-4 is crucial for the modulation of GLP-1 bioactivity and glucose homeostasis. GLP-1 has direct effects on the brain, heart, stomach, and endocrine pancreas, as well as indirect effects on the liver and muscle. A hypothesis has also been made to have beneficial cardiovascular and CNS effects. The expensive and drawn-out regular drug development process could be avoided by repurposing already-available anti-diabetic medications for neurodegenerative illnesses. Instead of using molecular target-based drug discovery or switching to a different treatment approach, drug repositioning is a unique approach. Due to the availability of earlier pharmacological safety data, this approach is comparatively inexpensive.Such comprehensive understanding of incretin concept may emphasize the essentiality of repurposing the currently available medications.

Key words:Neuroprotective, repurposing, glucagon-like peptide-1 agonists.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP07

ANTIMICROBIAL STEWARDSHIP PROGRAM

Ms. UMMARA*

1. Department of pharmacy practice (PP), Sultan-ul-uloom College of pharmacy

According to WHO antimicrobial resistance (AMR) is one of the top 10 global health and development threats facing humanity by killing around 1.27 million people worldwide and associated with more than 2.8 million antimicrobial resistant infections occurring each year. AMR requires multisectoral action in order to achieve the sustainable development goals (SDGs). Antimicrobial stewardship (AMS) is a healthcare response to this global threat that promotes appropriate use of antimicrobials, improves patient outcomes, and reduces microbial resistance and decrease the spread of infection caused by multidrug resistant organisms. The goals of AMS is to prescribe right drug, correct dose, right route, suitable duration. Timely de-escalation to pathogen directed therapy. AMS also help to prevent antimicrobial overuse, misuse and abuse in inpatient, outpatient, and community settings and associated to reduce healthcare associated cost. Implementing AMS by maintaining the use of restricted antibiotic and further reviewing it. With the above goals on target antimicrobial stewardship program include the following core elements: 1.Leadership commitment 2.Accountability 3.Drug expertise 4.Action 5.Tracking 6. Reporting 7.Education

Key words: Impact of antimicrobial stewardship in hospital, antimicrobial resistance, restricted antibiotics, antibiotic review form, multidrug resistance.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP08

3D ORGAN PRINTING

Fatima Maryam[1]*, Muskan

1. Department of pharmacy practice (PP), Sultan-ul-uloom College of pharmacy

Organ printing is a 3D technique that deposits layers of materials like living cells, ceramics and polymers on top of each other to construct a three dimensional organ. In recent years,the demand for organ transplantation has increased drasticallyand as no procedures are risk free. Organ transplantation brings new sets of infections, graft failure and graft vs host disease. Organ printing or bio-printing therefore eliminates the need for organ donors and chances of rejection by creating artificial organs that can be implanted into the human body. Through communication, the bio-printing software intercepts a draft for the specimen and then transfers the necessary to the printing apparatus. The bio-inks and hydrogel then, form the synthetic organ as per the design received, the usage of bio inks, self-assembling cells, and hydrogels which are led to produce the synthetic organ with the ability to retain all the physiological functions as the natural organ. Bio-printing offers many advantages compared to the traditional 2D tissue engineering. It’s more accurate, decreases the waiting time for donors and, the end organs are more comparable to the actual one. Bio-printing has its set of challenges which includes limited equipment, slow printing for mass production and needs humanintervention. Although disadvantages are more, implementation of organ printing is needed in the efficiency of health service management as well as making medical decisions. Upcoming years might be the years of 3D printed human organs revolution as it truly has the power to change the face of the medical industry.

Key words: Organ printing, Bio-printing, Organ transplantation, Bio-inks, Synthetic Organs.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP09

POLYPHARMACY IN A PATIENT WITH INTELLECTUAL AND DEVELOPMENTAL DISABILITIES.

Shireen Fatima*[1]

Department of Clinical Pharmacy, St.Pauls College of Pharmacy

The use of multiple drugs to treat diseases and other health conditions is known as polypharmacy. This is a growing concern for older adults. Polypharmacy is more common among older adults, many of whom have multiple chronic conditions (MCC),and also seen in People with disabilities are at increased risk of a number of health conditions, and often have multiple conditions which are treated with multiple medications (called polypharmacy) and often have multiple conditions (multimorbidity) for which they are prescribed multiple medications (polypharmacy).Instance, Prader-Willi syndrome (PWS) is an uncommon condition and its clinical manifestation in adulthood includes central obesity, hypogonadism, osteoporosis, cardiovascular disease, diabetes mellitus, and sleep apnea. Adults with intellectual and developmental disabilities (IDD) constitute about 2%-3% of the population in the United States of America. Examples of developmental disabilities include autism, behaviour disorders, brain injury, cerebral palsy, Down syndrome, fetal alcohol syndrome, intellectual disability, and spinal bifida. Additionally, the prevalence and severity of polypharmacy-related adverse events are greater among patients with IDD compared to those without IDD. With rising rates of polypharmacy among young adults, there is a significant chance of more adults with IDD having polypharmacy-related adverse events. Main focus on these potentially preventable adverse events among adults with IDD.

Key words: Multimorbidity, disabilities, IDD, potential, adulthood, Prader-willi syndrome.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP10

MEDICATION ADHERENCE: WHAT CAN WE DO BETTER?

Syeda. Zakir Unnisabegum[1]

[1]*Department of Pharmacy Practice, St Paul's College of Pharmacy,Turkayamjal,Hyderabad.*

Medication adherence, or taking medications precisely, is commonly defined as the extent to which patients take medication as prescribed by their doctors. This involves factors such as getting prescriptions filled, remembering to take medication on time, and understanding the purpose of the medication. Unfortunately, there are various barriers to achieving medication adherence, which all lead to alarming outcomes. Medication adherence isa prominentuniversal public health problem, particularly significant in the management of chronic diseases. Research shows that more than half of the people taking medication for a chronic condition are non-adherent. Nonadherence with medication is anintricate and multidimensional health care problem. The causes may be associated to the patient, treatment, and/or health care provider. As a consequence, substantial number of patients do not aid optimally from pharmacotherapy, resulting in increased morbidity and mortality as well as inflated societal costs. Components that may predict non adherence include forgetfulness, illiteracy, inability to understand the purpose of treatment, side effects etc. Several interventions may contribute to enhanced adherence. Regardless, most interventions have only a modest effect. Thus, despite the many efforts made, there has been little progress made as yet in tackling the issue of non-adherence. To improve adherence effectively, there is a need for a tailored approach based on the type and cause of non-adherence and the specific needs of the patient.

Key words: Medication, non-adherence, patients, adherence.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP11

ROBOTIC PHARMACYSYSTEM

Saniya Nilofar[1]

[1]*Sultan-Ul-Uloom College of Pharmacy,Hyderabad 500034,Telangana, Ranga Reddy.*

The aim of the robotic pharmacy is to provide patients with the prescribed medication when the medication is scheduled according to the professional's instruction. Robot is an automatically controlled, reprogrammable, multipurpose, manipulator programmable in three or more access, which may be either fixed in place or mobile for use in industrial automation applications. Robot is an intelligent agent either virtually or mechanically. The general problems faced by patients like medical errorsetc. can be overcome by using robotic system. Robotic system have proven to be more effective in eradicating errors as they operate with a 99.9% medication filling accuracy. It reduces needs for technical labour. Robotic systems have a self-check mechanism. The system provides check-up service in a faster and more accurate way compared to the proverbial physical check-up. The system continuously checks itself for expired drugs and gives restocking reports from time to time. The process automation was only available to multinational companies; however market is tending to automate their facilities due to their enormous advantages. The key take away from this study is that robots or machines can't replace human duties in their entirety. Important goals of our future research will be to cover more studies related to pharmacy robots.Robots can't identify incorrect inventory loading leading to wrong drug being dispensed thereby triggering health complications, a single mechanical malfunction can cost human lives.

Key words: Automation, Pharmacy Robot, Work flow, Pharmaceutical.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP12

POLYMYXINS INDUCED NEPHROTOXICITY

Akshaya Degam[1]*, Dr.Manda Anusha[2],

[1]*Department of Pharmacy Practice, St Paul's College of Pharmacy,Turkayamjal,Hyderabad*

[2]*Assistant Professor Department of Pharmacy Practice, St Paul's College of Pharmacy,Turkayamjal,Hyderabad*

Polymyxins are the polypeptide antibiotics used to treat the multidrug resistant Gram Negative bacteria. Nephrotoxicity is the very common side effect that occurs during the treatment. Polymyxins have a very narrow therapeutic window and patients requiring treatment with these drugs are frequently severely ill and have multiple comorbidities, which increases the risk of AKI. Recent dosing protocols for both colistin and polymyxin B have been developed and may help fine tune dose adjustment of these antibiotics. Minimizing exposure to modifiable risk factors, such as other nephrotoxic agents, is strongly recommended. The dose should be carefully selected, particularly in high-risk patients. The administration of oxidative stress-reducing drugs is a promising strategy to ameliorate polymyxin-associated AKI, but still requires support from clinical studies.

Key words: Polymyxins, Antibiotics, Polypeptide.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP13

IMPACT OF ARTIFICIAL INTELLIGENCE ON DRUG DISCOVERY AND DEVELOPMENT

T. Srilekha*[1]

1. Pharm D 6th YearDepartment of Pharmacy Practice, St Paul's College of Pharmacy, Turkayamjal, Hyderabad

Artificial Intelligence is a branch of engineering science focusing on making intelligent machines. The design of intelligent machines based upon the neural networks and perceptron. The artificial neurons think like human beings in learning, solving problems and decision making. This review mainly focuses on the milestones of AI, advantages and disadvantages of AI system. The applications of AI system in drug discovery process and in all areas of health care system was explained in detail.

Key words:Artificial Intelligence,Drug Discovery, health care system.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP14

MOYA MOYA: A CASE REPORT

A.Manasa*[1]

1. Pharm D 6th Year Department of Pharmacy Practice, St Paul's College of Pharmacy, Turkayamjal, Hyderabad.

A chronic, occlusive cerebrovascular illness known as Moya Moya, sometimes known as "hazy puff of smoke," involves bilateral stenosis or occlusion of the proximal sections of the anterior cerebral arteries and middle cerebral arteries (MCAs) as well as the terminal portion of the internal carotid arteries (ICAs). The internal carotid artery becomes progressively occluded and stenotic in Moya Moya, an idiopathic illness. The MMD refers to the creation of collateral tiny blood vessels associated with intracranial artery narrowing. MMD is widespread, however compared to western nations, it is more common in Asian nations. Ischemic, hemorrhagic, epileptic, and other are the four categories that the Japanese ministry of health and welfare has established. Ischemic stroke is more common in adults and children. Children are more prone to ischemic attacks than adults, who can also experience hemorrhagic stroke. The cause is not known. Seizures, headache, ischemia and hemorrhagic stroke are the clinical manifestations of MMD. Angiography is used to diagnose it. Pathophysiology is not supported by substantial evidence, yet this condition does happen because of some mutations. Surgery is typically used to treat it. Direct revascularization is more commonly used to treat Moya Moya disease compared to indirect revascularization.

Key words: MMD, Moya Moya, Case study.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP15

BIOSENSORS MANAGEMENT IN PHARMACY

GanjiPoojaReddy*[1], Mr.Sudhakar[2]

1.Pharm D Department of Pharmacy Practice, St Paul's College of Pharmacy, Turkayamjal, Hyderabad.

2. Assistant Professor Department of Pharmacy Practice, St Paul's College of Pharmacy, Turkayamjal, Hyderabad

Research sciences and medical Societies have recently shifted into using cost effective biosensors to test food & waiter contaminants, control human biologic process, asses precise health diagnosis, and more. Research and medical practioners need safe and cheaper means of performing their research. Ensuring public safety and delivering customized health options to patient. One such solution can be easily carried out by using biosensors. Biosensor's applications are of screening infections to early detection, chronic disease treatment, health management and wellbeing surveillance. Improved biosensor's technology is integral to numerous, low cost and improved-form factors feasible in modern medical devices. This presentation discusses biosensors and their significant benefits in the medical fields.

Key words: Biosensors, Application, Sensor technology.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP16

STEROIDS – EXPLOITATION

Kandhuri Tharun[*1], Mrs. P. Salome Satya Vani[2]

[*1] *Pharm-D Intern, Sri Venkateshwara College of pharmacy, Madhapur-86*

[2.] *Assistant professor, Sri Venkateshwara College of pharmacy, Madhapur-86, Hi-techcity road, Telangana-81,India*

Corticosteroids, more specifically glucocorticoids are one of the most prescribed drugs. Corticosteroids are adrenal hormones that serve significant physiologic activities such as modulating glucose metabolism, protein catabolism, calcium metabolism, bone turnover control, immunosuppression, and down-regulation of inflammatory cascade. Corticosteroids are regarded life-saving due to their various effects and have been used therapeutically to treat broad range of auto-immune, rheumatologic, inflammatory, neoplastic, and viral illnesses.However, the therapeutic benefits of glucocorticoids are restricted by the adverse effects. The most serious side effects of corticosteroids are associated with the use of higher doses for longer periods and OTC availability in specific pharmacies, which leads to dependency, as well as its usage in mild and moderate server instances, which is contrary to guidelines. In the recent times the use of corticosteroids has been multiplied with the emergence of the Covid -19 pandemic. WHO and the standard guidelines has recommended the usage of corticosteroids in critically ill covid-19 patients but their usage in mild and moderate cases caused more harm than benefit. This illicit usage has resulted in the development of opportunistic fungal illnesses such as mucormycosis, posing an extra risk to patients in terms of quality of life and finances. Other adverse effects of systemic corticosteroids include morphological changes, increased blood sugar levels, delayed wound healing, infections, decreased bone density, truncal obesity, cataracts, glaucoma, blood pressure abnormalities, and muscle fibre atrophy.In this review we want to discuss the significance and detrimental effects of corticosteroids emphasizing on the recent times i.e., COVID-19.

Key words: Corticosteroids, Glucocorticoids, COVID-19, Adverse effects, Anti-inflammatory.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP17

WEARING FACE MASKS: FACING A NEW PROBLEM

P Aashritha*[1]

[1]Pharm D Department of Pharmacy Practice, KVK College of Pharmacy

Till the beginning of 2020, face masks were primarily linked with medical health professionals, forensic, industry employs, chemistry and clinical lab staff or those dealing with hazardous materials. Nobody then imagined that face masks would become a part and parcel of everyday life for common man as well. Now face masks have become a part of our lifestyle, even attaining the coveted spot of an accessory, some with designer tags on them to safeguard people against corona virus. Nobody imagined a pandemic like Covid-19 could strike the world and stay on for as long. Now the situation learns that even wearing masks for prolonged period can have adverse impact on health, especially on oral health. To improve oral hygiene good dental practices can be inculcated into our daily lifestyle. This article puts a light on the adverse effects of wearing masks for a prolonged period and spread awareness on the remedies to combat this problem.

Key words: Masks, pandemic, oral health, adverse effects.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP18

A REVIEW ON FEW SIGNIFICANT OBSTACLES IN PUBLIC HEALTH AND HEALTHCARE SYSTEM - THEIR ACCEPTED OR REAL SOLUTIONS

G.Sahithi*[1]

[1]*Pharm D Department of Pharmacy Practice, St Paul's College of Pharmacy, Turkayamjal, Hyderabad.*

The Significant problems of today's public health are cancer, infertility, diabetes, cataract, congenital abnormalities, heart disease, obesity, hair loss, infectious diseases etc. There is an alternate and best solutions for each problem like life without germ cells i.e. producing offspring without germ cells for infertility problem and also major problems in healthcare system we are facing today like most pressing issue in health care currently is the high cost for patient care. In this view I would like to discuss the best therapy of few crucial diseases and cost benefit treatment to the patient. The current developments in healthcare system will be discussed.

Key words: Public health, Heatlh care system, Diseases.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP19

DRUG INTERACTIONS

B.Sathvika*[1] E Navya Pravala[2]

[1]*Department of Pharmacy Practice, St Paul's College of Pharmacy,Turkayamjal,Hyderabad*

[2]*Assistant Professor Department of Pharmacy Practice, St Paul's College of Pharmacy,Turkayamjal,Hyderabad*

The topic of drug interactions has received a great deal of recent attention from healthcare communities worldwide. Drug interactions are one of the most common and unwanted effects exerted by drugs. These are of different types and depending upon the type; they show different effects on the body. They are of pharmacokinetic and pharmacodynamics type. Drug interactions if left untreated; may lead to serious complications. Drugs with a narrow therapeutic range or low therapeutic index are more likely to be the objects for serious drug interactions. Drug -Drug interactions are one of the most common causes of medication error in recent times. In particularly; poly therapy increases the complexity of therapeutic management and thereby the risk of clinically important Drug -Drug interactions; which can induce the development of adverse drug reactions or reduce the clinical efficacy. Adverse drug events account up to 5% of hospital admission per year and an increase in the length of hospital stay. Now, it is necessary to focus more on Drug interactions so that the severe complications can be subsided in early stages.

Key words: *Drug interactions; pharmacodynamics; pharmacokinetics; adverse drug reaction; metabolism; effects of drugs.*

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP20

GINGIVAL ENLARGEMENT: THE DISEASE OF GUMS

KomalSuthar*[1], Navya Pravala[2]

[1]*Department of Pharmacy Practice, St Paul's College of Pharmacy,Turkayamjal,Hyderabad*

[2]*Assistant Professor Department of Pharmacy Practice, St Paul's College of Pharmacy,Turkayamjal,Hyderabad*

Gingival enlargement is one of the frequent features of gingival diseases. However due to their varied presentations, the diagnosis of these entities becomes challenging for the clinician. They can be categorized based on their Etiopathogenesis, location, size, extent, etc. Based on the existing knowledge and clinical experience, a differential diagnosis can be formulated. Subsequently, after detailed investigation, clinician makes a final diagnosis or diagnosis of exclusion. A perfect diagnosis is critically important, since the management of these lesions and prevention of their recurrence is completely dependent on it. Furthermore, in some cases where gingival enlargement could be the primary sign of potentially lethal systemic diseases, a correct diagnosis of these enlargements could prove life saving for the patient or at least initiate early treatment and improve the quality of life. The purpose of this review article is to highlight significant findings of different types of gingival enlargement which would help clinician to differentiate between them. A detailed decision tree is also designed for the practitioners, which will help them arrive at a diagnosis in a systematic manner. There still could be some lesions which may present in an unusual manner and make the diagnosis challenging. By knowing the existence of common and rare presentations of gingival enlargement, one can keep a broad view when formulating a differential diagnosis of localized (isolated, discrete, regional) or generalized gingival enlargement.

Key words: Differential diagnosis, Gingival hyperplasia, Gingival overgrowth, Gingival diseases, Decision tree.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP21

CASE REPORT ON THIAZIDE-INDUCED HYPONATREMIA LEADING TO EXTRA PONTINE MYELINOLYSIS

Raj Kumar*[1], Dr. Are anusha[2]

[1]*Department of Pharmacy Practice, St Paul's College of Pharmacy, Turkayamjal, Hyderabad*

[2]*Associate Professor Department of Pharmacy Practice, St Paul's College of Pharmacy, Turkayamjal, Hyderabad*

Extra pontine Myelinolysis (EPM) is a type of neurological disorder characterized by altered sensorium, movement abnormalities, seizures, and parkinsonian-like symptoms. It is rare disorder involving wide etiological factors of which the most common is hyponatremia and its correction. Hyponatremia usually develops as a result of the use of certain medications like benzodiazepines, diuretics, etc. Other causes include chronic kidney disease, heart disease and metabolic disorders. EPM can be diagnosed with MRI and CT scans. In order to prevent this fatal disease, it is recommended to closely monitor the patients on medication like thiazides or benzodiazepines for serum sodium levels and maintain adequate amounts with adjuvant therapies and fallow recent guidelines for the controlled correction of existing hyponatremia. Myelinolysis can only be treated symptomatically with neurological agents and physical therapies as no specific cure exists.

Key words: Extra Pontine Myelinolysis, Hyponatremia, Benzodiazepines.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP22

NEUROTOXIN INDUCED BOTULISM, A FOODBORNE FATAL DISEASE: CASE REPORT.

A.N.Shivani*[1], Dr. Anusha Are[2]

[1]*Department of Pharmacy Practice, St Paul's College of Pharmacy, Turkayamjal, Hyderabad*

[2]*Associate Professor Department of Pharmacy Practice, St Paul's College of Pharmacy, Turkayamjal, Hyderabad*

Botulism is a rare disease occurring worldwide.Foodborne botulism is an acute paralytic disease caused by the consumption of food containing the botulinum toxin,*Clostridiumbotulinum*.The main sources of food-induced botulism include canned and fermented foods.Comprehensive history collection along with physical and systemic examinations,lab investigations, and toxin extraction remains an asset for early detection.Due to its rare prevalence, high vigilance is required while making a differential diagnosis of botulism. Toxin identification in the serum,stoolsand gastrointestinal contents is crucial.Symptoms may range from minor symmetrical cranial nerve palsies to descending weakness and rapid respiratory arrest.The rare form of its disease is also attenuated to the management as there is only one solution for the curve,which is the administration of antitoxins within 24 to 48 hours post-consumption. The antitoxin administered neutralizes the neurotoxin released by the bacteria by inhibiting their binding to neuromuscular junctions,thereby preventing the progression of disease status. However,supportive therapyand ventilation in intensive care also aid in improving the condition,especially in a case with respiratory system involvement. Early diagnosis and timely administration of antitoxin is the key for successful management of Botulism and to avoid morbidity and mortality.

Key Words:Botulism, Clostridium botulinum, Food-borne, Neurotoxin, Paralysis.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP23

IMPORTANCE OF USAGE OF NEUTRACEUTICALS TO HUMAN KIND

M.Anjali*[1], Mr.Santhosh[2]

[1]*Department of Pharmacy Practice, St Paul's College of Pharmacy, Turkayamjal, Hyderabad*

[2]*Assistant Professor Department of Pharmacy Practice, St Paul's College of Pharmacy, Turkayamjal, Hyderabad*

Neutraceutical is the hybrid of 'nutrition' and 'pharmaceutical'. Nutraceuticals, in broad, are food or part of food playing a significant role in modifying and maintaining normal physiological function that maintains healthy human beings. The principal reasons for the growth of the nutraceutical market worldwide are the current population and the health trends. The food products used as nutraceuticals can be categorized as dietary fibre, prebiotics, probiotics, polyunsaturated fatty acids, antioxidants and other different types of herbal/ natural foods. These nutraceuticals help in combating some of the major health problems of the century such as obesity, cardiovascular diseases, cancer, osteoporosis, arthritis, diabetes, cholesterol etc. In whole, 'nutraceutical' has lead to the new era of medicine and health, in which the food industry has become a research oriented sector.

Key words: Neutraceutical, osteoporosis, arthritis, diabetes, cholesterol.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP24

SODIUM-GLUCOSE CO-TRANSPORTER INHIBITORS ARE THE RATIONALE APPROACH TO REDUCE MORTALITY AND MORBIDITY IN TYPE 2 DM PATIENTS WITH HEART FAILURE

Durishetty Soujanya[1], Dr. M Kiranmai[2]

[1]*Department of Pharmacy Practice, St Paul's College of Pharmacy, Turkayamjal, Hyderabad*

[2]*Professor and Principal, Department of Pharmacy Practice, St Paul's College of Pharmacy, Turkayamjal, Hyderabad*

Diabetes mellitus is the metabolic syndrome, characterised by inadequate control of blood glucose levels and it is classified into type 1, type 2, maturity-onset diabetes of the young (MODY), gestational diabetes, neonatal diabetes, and steroid-induced diabetes. As per the epidemiological data, 537 million adults of the age between 20-79 years age old are suffering with diabetes.Diabetic mellitus is one of the major risk factors for cardiovascular disease (CVD), people with type 2 diabetes mellitus (T2DM) have a higher cardiovascular morbidity and mortality.T2DM leads can increased risk of vascular disease, with diabetes induced micro and macro vascular complications is the major causes of morbidity and mortality in patients with T2DM. A meta -analysis of 102 studies found that T2DM was associated with a 2-fold increased risk of vascular diseases such as coronary heart disease and stroke, independent of other risk factors including age, sex, smoking, body mass index, and systolic BP.Kidney's role in the reabsorption of glucose from the glucose filtrate as leads to investigation of SGLT2 as a potential therapeutic target for T2DM. SGLT2 inhibitors decrease the capacity of proximal tubule to reabsorb glucose from the glomerular filtrate.Clinical studies have shown that SGLT2 inhibitors improve glycemic control when employed in patients with both early and late stages of T2DM.SGLT2 inhibitors have the potential to reduce CV risk in patients with T2DM not only through beneficial effects on glycemic control, but also via beneficial effect on body weight, bp, lipids, and serum uric acid.

Key words:SGLT2 Inhibitors, Antidiabetic Therapy, Cardio Vascular Complications.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP25

USE OF SACUBITRIL/VALSARTAN IN PATIENTS WITH CARDIO TOXICITY AND HEART FAILURE DUE TO CHEMOTHERAPY

Sameera Fatima*[1]

[1]*Department of Pharmacy Practice, St Paul's College of Pharmacy, Turkayamjal, Hyderabad.*

Cancer therapy-related cardiac dysfunction (CTRCD) is a critical problem with an impact on both oncological and cardiovascular prognosis, especially when it prevents patients from receiving cancer treatment. Standard therapy for heart failure (HF) is recommended for CTRCD. The aim of this trial was to study the effectiveness of sacubitril-valsartan in patients with CTRCD treated in cardio-oncology units. We enrolled 635 patients with breast cancer and followed them with echocardiography and NT- proBNP. Patients who developed left ventricular dysfunction and heart failure were treated with angiotensin-converting enzyme inhibitors (ACEI) (enalapril) or angiotensin receptor blockers (ARB) (valsartan), aldosterone antagonists (eplerenone), digitalis and diuretics (furosemide), as needed. When patients remained symptomatic and met the PARADIGM-HF inclusion criteria, sacubitril/valsartan was started instead of enalapril or valsartan. We analysed clinical, laboratory and echocardiographic variables to determine the beneficial effects of sacubitril/valsartan on left ventricular remodelling (improvement of left ventricular ejection fraction (LVEF), left ventricle internal diameter in diastole), diastolic dysfunction (E/e' ratio), reduction in NT-proBNP levels, New York Heart Association (NHYA) class and improvement in the 6-min walk test. Also, we analysed serum creatinine and potassium levels to determine treatment safety in this population. Median follow-up was 20months. Twenty -eight patients developed cardiotoxicity and were treated with sacubitril/valsartan. The sacubitril/valsartan dose was100 mg (sacubitril 49 mg/valsartan 51 mg) in 12 patients (42.85%) and 200 mg (sacubitril 97 mg/valsartan 103 mg) in 16 patients (57.15%). No deaths were reported, and one patient underwent heart transplantation. Baseline median NT-proBNP was 997.5 pg/ml (IQR 663.8 — 2380.8), which decreased to a median of 416.5pg/ml (IQR 192.0–798.2) on follow-up with $p < 0.001$. Baseline NYHA functional class was III (78.6%) or IV (21.4%), and it improved to I (57.1%) or II (42.9%) on follow-up.

Key words:Valsartan, Cardiotoxicity, Chemotherapy.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP26

IMPLICATIONS OF SURGICAL PROPHYLAXIS FOR THE GOOD PATIENT COMPLIANCE AND THERAPEUTIC OUTCOMES IN A

*Umme Aiman Rafai**[1]

[1]*Department of Pharmacy Practice, St Paul's College of Pharmacy, Turkayamjal, Hyderabad.*

Surgical prophylaxis refers to the antimicrobial agent given just before the beginning of the procedure. The potency of antimicrobials to prevent post-surgical infections at the site of surgery (incisional superficial, incisional deep, and organ or space infection) has been illustrated for many surgical procedures. Primary prophylaxis is defined as prevention of an early infection. Secondary prophylaxis is defined as prevention of reappearance of the pre-existing infection. Tertiary prophylaxis is defined as process to redeem from chronic disease. Quaternary prophylaxis is defined as prevention of increased harmful treatment. An adverse drug reaction (ADRs) is the major health issue. An ADR is a reaction that is noxious, is unintended, and occurs at doses normally used in human. According to National coordinating council for medication error reporting and prevention, (ADEs) adverse drug events are harmful that are either associated to the dose of the drug or the medical intervention. According to the studies, the use of prophylactic antibiotics significantly reduced the risk of surgical site infection and numerous infections can be prevented by prophylaxis. The timings of surgical antimicrobial prophylaxis, this study found that it is more beneficial to administer a preventive antibiotic before 30 to 59 minutes. Surgical site infections are prevented by prophylaxis. Surgical prophylaxis has to be logical and proportional to the standard guidelines, with assessment to the time of administration and dose of prophylactic drug. Optimum time of antibiotic administration is considered as a major factor for productive prophylaxis. Morbidity and mortality can be decreased by enlightening about the drug and its contraindications, adverse effects, comorbidities and its interaction to the patient.

Key words: Good patient compliance, Antimicrobial agent, ADRs.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP27

ANTIBIOTIC RESISTANCE

NimishaVegiraju*[1], Rahman Shaik[2], Dr. M. Kiranmai[3]

[1]*Department of Pharmacy Practice, St Paul's College of Pharmacy, Turkayamjal, Hyderabad*

[2]*Assistant Professor Department of Pharmacy Practice, St Paul's College of Pharmacy, Turkayamjal, Hyderabad*

[3]*Professor and Principal, Department of Pharmacy Practice, St Paul's College of Pharmacy, Turkayamjal, Hyderabad*

Medicines known as antibiotics are used to both prevent and treat bacterial infections. When bacteria adapt to the use of antibiotics, antibiotic resistance develops. Both humans and animals are susceptible to infection from these germs, and their infections are more difficult to treat than those brought on by non-resistant bacteria. List of common bacteria with high antibiotic resistance include 1. Methicillin-resistant Staphylococcus aureus (MRSA), 2. Vancomycin-resistant *Enterococcus* (VRE), 3. Carbapenem-resistant *Enterobacteriaceae* (CRE),n4.multi-drug resistant *Mycobacterium tuberculosis* (MDR-TB). Different surveys across the globe indicate that many patients firmly believe antibacterial agents would help with viral diseases like the common cold or flu. There are two main ways that bacterial cells can acquire antibiotic resistance. One is through mutations that occur in the DNA of the cell during replication. The other way that bacteria acquire resistance is through horizontal gene transfer. There are three different ways in which this can occur, but in each case genetic material is transferred from antibiotic-resistant bacteria to other bacterial cells, making them resistant to antibiotics as well. Once bacterial cells acquire resistance, exposure to antibiotics kills off non-resistance bacteria, while the antibiotic-resistant bacteria proliferate.

Key words: Antibiotics, Resistance, MRSA.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP28

CORTICOSTEROIDS INDUCED AVASCULAR NECROSIS OF HIP, A "LONG COVID-19" COMPLICATION: CASE REPORT

B. Mallikarjun,[1]Asra Jabeen[1], Dr. Are Anusha[2]

[1]*Department of Pharmacy Practice, St Paul's College of Pharmacy, Turkayamjal, Hyderabad*

[2]*Associate Professor Department of Pharmacy Practice, St Paul's College of Pharmacy, Turkayamjal, Hyderabad*

Since it first surfaced, the new Coronavirus has multiplied and mutated into different forms, leading to a significant impact on people's lives. COVID-19's long-term impact is not completely known: It can only be hypothesized based on the prior outbreak of severe acute respiratory syndrome (SARS). Avascular necrosis (AVN) is one of these consequences, which if left untreated can lead to catastrophic events and bone collapse. It's important to remember that individuals who have recovered from COVID-19 infection are still at risk of developing AVN. The pathological findings in severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection are very similar to those seen in severe acute respiratory syndrome coronavirus (SARS-CoV) infection. We present cases of 27- and 69-years old men with no comorbidities admitted with complaints of bilateral hip pain post Covid treatment with corticosteroids and antivirals. The diagnosis was established based on history, physical examination, and magnetic resonance imaging (MRI). The use of corticosteroids in the treatment of SARS-CoV-2 infection has saved many lives, and it is still advised for moderate to severe cases on a short-term basis. The long-term use of corticosteroids is associated with numerous side effects. One of the most prevalent side effects of steroids is avascular necrosis of the femoral head, which is aggravated by the disease process. Early detection of avascular necrosis is very crucial in its management due to its high progression rate. Low therapeutic doses of corticosteroids with minimal effective duration remain the key to halting its occurrence.

Key words: Avascular necrosis, Corticosteroids, Complications, Long COVID, COVID-19 Pandemic, SARS CoV-2.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP29

SMART DETECTION DEVICES FOR CHRONIC DISEASES

HemaPasupuleti*[1], Mary Manisha Mannam*[2]

[1.] *Department of Pharmacy practice, St. Pauls College of Pharmacy, Turkayamjal, Ranga Reddy (D)..*

[2.] *Research Scholar, Middlesex University, Hendon campus, London, NW4 4BT, United Kingdom.*

The quality of life of patients is being affected day by day as the detection or identification of the diseases in an individual is not up to the mark. Specially diseases that could be identified at a long run in the individual's body. There are many equipment's that are available in the market for the detection of the diseases that requires the hospital building, special set up with a sterile environment, nurses, physicians, X-Rays, ECG's, laboratory staff, Lab Technicians etc., and all these techniques that are used in the disease recognition are uneconomical and very uncomfortable for patients while testing. Hence, these equipment's though detect the condition they may not detect appropriately as in few conditions the biomarkers that are available in the body are not the main target in identification of the diseased condition. Biomarkers are significantly available targets that help in detection of the disease more appropriately and more accurately. In such cases equipment's that are being used for the identification could be replaced by a smaller and more economical devices such as biosensors. Biosensors play a major role in detection of devices with quantifiability, sensitivity, specificity, compatibility and bio stability. Typical capacities of biosensors include waste detection, psychiatric management, food analysis, biomedical testing, agricultural testing, forensic analysis and most critically in detection of medical clothing and disease diagnosis including cancer, CVS, diabetes etc. These positive implications of biosensors have widened the scope as "personalized and précised medicine" in health care sector which are redefining the pace of medical treatment. The customizations can be bought with the involvement of more sophisticated technologies like Artificial intelligence, internet and 5G approach which makes it more confidential and sensitive.

Key words: Biomarkers, Biosensors, Diagnosis.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP30

OVERVIEW OF ATOGEPANT (QUILPTA) – THE FIRST AND ONLY ORAL CALCITONIN GENE-RELATED PEPTIDE RECEPTOR ANTAGONIST

FareesaKauser*[1],WasiAhmed[1]

[1]*Department of Pharmacy practice, St. Pauls College of Pharmacy, Turkayamjal, Ranga Reddy (D).*

Migraine is a complex neurological disorder characterised by episodic headache associated with gastrointestinal symptoms, autonomic disturbances and other neurological symptoms. Globally, 14% of people report having migraine, making them the second most common cause of disability. Prophylactic therapy is the most effective strategy to lower the frequency and severity of migraineattacks. Beta blockers like Timolol, Propanolol, and anticonvulsants like Topiramate are among the first line oral prophylactic drugs. While, drugs administered intravenously include calcitonin gene-related peptide (CGRP) antagonists like Zolmitriptan. Few people turn to prophylactic therapy because of inadequate diagnostic tools, inappropriate dosing regimens, and decreased efficacy. Atogepant is the first orally available CGRP antagonist sold under the brand name QULIPTA for the prophylactic treatment of chronic and episodic migraines in adults. It acts by blocking the α-CGRP receptor present on the vascular smooth muscle cell membrane of cranial arteries. This drug meets the daily standard of prophylactic therapy, with added advantages of oral administration, less hepatotoxicity, better efficacy, safety, and tolerability in patients. Its use improves medication adherence, therapeutic outcomes, reduces migraine-related disability, and minimizes medication overuse headaches. Using current research, we have taken this opportunity to raise awareness about the use of this drug for migraine treatment in India.

Key words:Atogepant, Calcitonin Gene Related Peptide (CGRP), Migraine.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP31

COGNITIVE BEHAVIORAL THERAPY FOR SUDS

Mohammed mustafa[1*]

[1]*Yenepoya Pharmacy College and Research Centre (Deemed to beUniversity), Mangalore,Karnataka,India.*

Substance use disorders (SUDs) are heterogeneous conditions characterized by recurrent maladaptive use of a psychoactive substance associated with significant distress and disability. These disorders are highly common, with lifetime rates of substance abuse or dependence estimated at over 30% for alcohol and over 10% for other drugs. CBT **(Cognitive Behavior Therapy)**is a form of therapy that has gained much attention within the last few decades. According to the cognitive behavioral therapy model, your thoughts, emotions, and behaviors are inextricably linked. As William Shakespeare wrote in Hamlet, "for there is nothing either good or bad, but thinking makes it so". Although CBT for substance abuse is characterized by heterogeneous treatment elements—such as operant learning strategies, cognitive and motivational elements, and skills building interventions. In contrast to some other forms of psychotherapy, CBT tends to be more problem-solving oriented, shorter term, and focused on the present. As understanding of the nature of substance use patterns has improved, a greater specificity of both psychosocial and pharmacologic treatments has followed, with evidence for the efficacy and cost effectiveness of these approaches. At the outset of considering treatment, motivation for treatment and the likelihood of treatment adherence needs to be considered.

Key words: Cognitive Behavior therapy (CBTs), Learning Strategies, Motivational Elements, Skills Building Interventions, Substance Use Disorders (SUDs).

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP32

CAUSALITY AND SEVERITY ASSESMENT OF ADVERSE DRUG REACTIONS AMONG MDR-TB AND XDR-TB PATIENTS WITH DIFFERENT ANTI TUBERCULAR REGIMENS

P Narayana Swamy*[1]

[1]*Research scholar, School of Pharmaceutical Sciences, Vels Institute of Science Technology and Advanced Studies (VISTAS), Pallavaram, Chennai - 600117*

The main aim of this study is to assess adverse drug reactions among the patients treated with different regimens for MDR and XDR-TB. Patients who were diagnosed with MDR and XDR-TB of either gender. The causality assessment of the ADRs was done by using the WHO and Naranjo's scales. The severity of ADRs in the present study was assessed by using Modified Hartwig and Siegel scale and was classified into mild, moderate and severe. Among the 508 study participants, 161 (31.69%) were observed to be with various adverse drug reactions in this study. In this study, most of the ADRs were observed to be with gastrointestinal related (29.52%) followed by nausea & vomiting (20.07%), swelling and pain at the injection site (3.54%) and ototoxicity (4.33%). According to the Naranjo's scale, the causality assessment was done and it was observed that among the 161 cases, 9(5.59) were observed to bedefinite, 79 (53.55) were observed to be possible ADRs 85 (46.44%) were observed to be probable ADRs and whereas the remaining 7(4.34) were observed to be doubtful ADRs. According to the Naranjo's causality assessment, most of the ADRs were possible ADRs followed by probable, most of the ADRs were observed to be with moderate severity followed by mild severity. Clinical pharmacists should take responsibility of the identification, management and prevention of adverse drug reactions.

Key words:Tuberculosis, Adverse drug reactions, multidrug resistance, extensively drug resistance.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP33

CASE REPORT – ON PEMPHIGUS VULGARIS

M.priscilla Evangeline[1], Dr. Praveen Kulkarni [2]

[1]*Pharm-D Intern, Department of Pharmacy Practice, St.Pauls College of Pharmacy, Turkayamjal, Hyderabad.*

[2]*Internal Medicine, KIMS,Hyderabad*

It is rare chronic blistering skin disease which is more common with pemphigus. It is classified as a type II hypersensitivity reaction in which antibodies are formed against desmosomes. As desmosomes are attacked, the layers of skin separate and the clinical picture resemble a blister. These blisters are due to acantholysis, or breaking apart of intercellular connections through an autoantibody-mediated response. Pemphigus vulgaris most commonly presents with oral blisters (buccal and palatine mucosa, especially), but also includes cutaneous blisters. Other mucosal surfaces, the conjunctiva, nose, esophagus, penis, vulva, vagina, cervix, and anus, may also be affected. Flaccid blisters over the skin are frequently seen with sparing of the skin covering the palms and soles. Pemphigus is an autoimmune disease caused by antibodies directed against desmosomes. Loss of desmosomes results in loss of cohesion between keratinocytes in the epidermis, and a disruption of the barrier function served by intact skin. The process is classified as a type II hypersensitivity reaction. Corticosteroids and other immunosuppressive medications have historically been employed to reduce symptoms. Intravenousimmunoglobulin, mycophenolatemofetil, methotrexate, azathioprine, and cyclophosphamide have also been used with varying degrees of success. An established alternative to steroids are monoclonal antibodies such as rituximab, which are increasingly being used as first-line treatment. Treatment is more successful if initiated early on in the course of disease, perhaps even at diagnosis. Rituximab treatment combined with monthly IV immunoglobulin infusions has resulted in long-term remission with no recurrence of disease in 10 years after treatment was halted.

Key words: Pemphigus Vulgaris, skin disease, chronic blisters, Corticosteroids.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP34

MANAGEMENT STRATEGIES FOR MOSQUITO BORNE DISEASES AND KNOWLEDGE, ATTITUDE & PRACTICE AMONG RURAL POPULATION

MallickMaidul Islam[1], P.Meghana[2], M. Aradhana[3], Gunji Jaya Kishore[4],V. Ravi Teja[5], V. Alagarsamy[6].

[1]*Department of Pharmacy Practice, MNR College of Pharmacy, Sangareddy, TS- 502294.*

The diseases that are transmitted by mosquitoes are called as mosquito borne diseases: includes dengue, malaria, chikungunya, filariasis, west nile virus, yellow fever, zika virus, japanese encephalitis etc. A cross-sectional observational study was conducted in MNR Medical College & Hospital, Sangareddy and other hospitals of Sangareddy for a period of 6 months. Data was collected from case files of Ns1, Ig G and Ig M positive, Pv, Pf positive patients from both the genders of all age groups, data was analysed using by one way ANOVA & simple percentage method. The data was summarised and described using tabulations. Questionnaire based crosssectional study was carried out among 304 participants in Ismailkhanpet village, Sangareddy. A total of 390 prescriptions, out of which 240 were of dengue and 150 were of malaria were analysed including IV fluids and blood products. Among 240 Dengue patients, 44 (18.33%) patients were prescribed with IV fluids, 24 (10%) patients were prescribed with tablet caripill, 120 (50%) patients were prescribed with tablet caripill + IV fluids, 20 (8.33%) were prescribed with IV fluids + syrup platizest, 20 (8.33%) patients were prescribed with IV fluids + tablet caripill + SDP, 12 (5%) patients were prescribed with IV fluids + syrup platizest + SDP. Among 150 malaria patients, 30 (20%) patients were prescribed with chloroquine, 60 (40%) patients were prescribed with artesunate and chloroquine, 50 (10%) patients were prescribed with artesunate and primaquine, 30 (20%) patients were prescribed with artesunate + chloroquine + lumerax, 15(10%) patients were prescribed with artesunate. In KAP study, among the 304 participants 240 (78.94%) were aware only about dengue and 192 (63.15%) were aware only about malaria and 157 (51.6%) were aware about both dengue and malaria, out of 304 participants majority of the them thought that polluted water is the main breeding sites, followed by stagnant water.

Key words: Mosquito borne diseases, dengue fever, malaria, prescribing pattern, KAP study, breeding places.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP35

KNOWLEDGE, ATTITUDE AND PERCEPTION ON PSORIASIS AMONG PHARMACY STUDENTS

Dr.P.Maheshwari[1] M.Abinash[1] Dr.P.Shanmugasundaram[2]

1. *Department of Pharmacy Practice, School of Pharmaceutical sciences, Vels Institute of science Technology and Advanced Studies (VISTAS), Pallavaram, Chennai-600117*

The aim of the study is to assess the knowledge, attitude and perception of psoriasis among pharmacy students. To evaluate the knowledge, Attitude and Perception among pharmacy students regarding psoriasis. A online semi structured questionnaire will be develop by using Google Forms. The link of the questionnaire will be Distribute among the pharmacy students through social media platform. The first section consist of demographic data, the second section consist of question to assess the knowledge towards the psoriasis, the third and fourth section to assess the attitude and perception of the students towards the psoriasis The collected data will be entered in Microsoft excel spread sheet for further analysis. The data will be statistically analysis by using SPSS software. Chi square test will be Assess if there is significant difference between category variable. A p value of <0.05 was to be statistically significant. Psoriasis is a chronic, recurrent inflammatory skin disorder. In psoriasis there is a rapid abnormal multiplication of epidermal layer of the skin. In this study we aim at understanding the Knowledge, Attitude and Perception of pharmacy students regarding psoriasis. A total of 123 participants were including of which 60 students where B. Pharm final year, 20 students from Pharm.D IV Year, 21 students of Pharm.D V Year and 22 students from Pharm.D VI Year. There was a knowledge gap between the education qualifications of pharmacy students this is understandable since the clinical practice of students increases with higher education pattern. The future aspect of the study is to conduct study among more diverse population. for better understanding of psoriasis. Further some Continuing Medical Education activities, Seminars, distribution of Pamphlets could help in improvement of Knowledge, Attitude & Perception of the pharmacy students.

Key words: Psoriasis, Pharmacy students, knowledge, Attitude.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP36

RATIONAL USE OF ANTIBIOTICS AND ADR MONITORING

Pachala Sairam *, P.Suvarna Siddheswari, Dr.M.Kirammai

[1]*Department of Pharmacy Practice, St Paul's College of Pharmacy, Turkayamjal, Hyderabad*
[2]*Assistant Professor Department of Pharmacy Practice, St Paul's College of Pharmacy, Turkayamjal, Hyderabad*
[3]*Professor and Principal, Department of Pharmacy Practice, St Paul's College of Pharmacy, Turkayamjal, Hyderabad*

Antibiotic resistance is an issue of growing global concern. One key strategy to minimise further development of resistance is the rational use of antibiotics, by providers and patients alike. The essential target of therapy with antibiotics is successful treatment of individual patients with bacterial infections. The optimal clinical treatment results can only be achieved when the toxicity, selection of pathogens and development of resistance are minimized. All antibiotic use, whether appropriate or not, can promote the emergence of resistance in bacteria. Unfortunately, inappropriate and excessive use of antibiotics is common in both high and low income countries, and in both the human and animal sectors. To limit inappropriate use of antibiotics is crucial to preserve antibiotic effectiveness for both human and veterinary medicine.

Key words- Anti-microbials, Rational use, gram positive, gram negative, cephalosporins.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP37

COVID-19 MEDICATIONS AND ITS POST EFFECTS

, A.Anusha[1]**B. Sowmya2**

1. Pharm D 6th year, Department of Pharmacy Practice, St. Pauls College of Pharmacy

2. Associate Professor, HOD, Department of Pharmacy Practice, St. Pauls College of Pharmacy

Till date, over 163 million confirmed cases of COVID-19 and over 3.3 million deaths from COVID-19 have been reported by the World Health Organization (WHO). However, there is still no specific treatment for the disease. Some empirical and supportive medications have been used thus far, including antivirals, antipyretics, antibiotics, and corticosteroids. Corticosteroids are anti-inflammatory and immunosuppressive medications that are used to treat several diseases. These agents can produce undesirable and occasionally severe systemic adverse effects. Although the occurrence and severity of most adverse effects are related to the dose and duration of the corticosteroid therapy, avascular necrosis is not directly associated with this dose and duration, and may occur without osteoporosis. The basis of the use of such corticosteroid drugs in patients suffering from COVID-19 is the immunosuppressant nature of the drugs Corticosteroids are not recommended for routine use in COVID-19 patients by the WHO. But it is widely used by many people for treating this condition. Severe COVID-19 patients are at risk of avascular necrosis due to corticosteroid therapy Avascular necrosis is a progressive and incapacitating condition. The causes of avascular necrosis are categorized into traumatic and non-traumatic. The majority of non-traumatic cases are associated with the use of corticosteroids. Popular corticosteroid drugs and therapies that are being prescribed in patients suffering from COVID-19 are dexamethasone, methylprednisolone and or hydrocortisone with IV (intravenous) and/or oral administration. The use of such high doses of corticosteroids have shown very positive results and have been lifesaving in many cases.

Key words:Corticosteroids, Avascular necrosis, covid-19, methylprednisolone.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/OPP38

EBOLA VIRUS: THE ENDEMIC DISEASE OF WESTERN AFRICA

[1]C.ANIRUDH,[2]NAVYA PRAVALA

[1]*Pharm-D II year, St Pauls College of Pharmacy, Turkayamjal.*
[2]*Assistant Professor, Department of Pharmacology, St Pauls College of Pharmacy, Turkayamjal.*

Ebola Virus Causes A Disease Called Ebola Virus Disease.EbolaVirus First Discovered In 1976 Near The Ebola River In What IsNow The Democratic Republic Of Congo. The Purpose OfStudy Is To Know About The Infection Caused By It In HumansAnd What Are The Pathological Changes In The Body. ThisHelps Us To Know About The History Of The Disease. As It WasMajorly Effected In The Year 2014.What Are Medications UsedFor The Treatment Of The Disease. Why The Disease Is Endemic To Western Africa. What Was The Effect On The Population Of Western Africa?

Key Words: Ebola Virus, Medication, Democratic Republic Of Congo, Pathological Changes.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCEU01

NANO DRUG DELIVERY SYSTEMS: PAST, PRESENT AND FUTURE PERSPECTIVES

Farheen Fatima[1], Firoze Khan [2], Hamidul Islam [3], Dr. K Venu Madhav [*]

1,2,3 . BPharm, St Paul's College of Pharmacy, Turkayamjal, Abdullapurmet, Ranga Reddy (D) Telangana,India - 501510

4.Department of Pharmaceutics, St Paul's College of Pharmacy, Turkayamjal, Abdullapurmet, Ranga Reddy (D) Telangana, India -501510

Nano drug delivery systems is the novel medicine that deals with science of nanotechnology which results in nanomedicine or nanoparticles for targeted drug delivery and controlled release of therapeutic agents. Since ancient times human have widely used natural products. A recent trend in natural products-based drug discovery has been the interest in designing synthetically lead molecules. This lead in discovery of novel drug delivery system such as target based drug and nano medicine. Nanotechnology is shown to bridge the barriers of biological and physical science by applying nanostructures and nano phase at various fields of science. Nano materials can be well defined as a material with sizes ranged between 1-100nm.Nano medicines have become well appreciated in recent times due to the fact that nano structures could be utilized as delivery agents by encapsulating drugs or attaching therapeutic drugs and deliver them to target with a controlled release. These nano formulations are often capable of reducing the toxicity while increasing the pharmacokinetics properties of drug. Nanotechnology has dynamically developed in recent years. The application of nanomedicines and nano-drug delivery system is certainly the trend that will remain to be the future arena of research and development. The use of nanotechnology was largely based on enhancing the solubility, absorption, bioavailability and controlled release of drugs. Polymeric nanoparticles (nano capsules and nanospheres) synthesized through solvent evaporation, emulsion polymerization and surfactant-free emulsion polymerization have also been widely introduced. Advances in nano medicines is really appreciable and beneficial, thus our ability to diagnose diseases and even combining diagnosis with therapy has also become a reality.

Key words: Nano technology, Nanoparticles, Drug efficacy, Pharmacokinetics, Drug release.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCEU02

FORMULATION DEVELOPMENTAND *INVITRO*EVALUATION OF SUSTAINED RELEASEMATRIX TABLETS OF CAPECITABINE

Gunti Sowmya [1], Naga Haritha*, and Venu Madhav katla[2]

1 Department of Pharmaceutics, St.pauls College of pharmacy, R.R District, Telangana, India 501510;
2 Department of Pharmaceutics, St.pauls college of pharmacy, R.RDistrict, Telangana, India 501510;

Aim of the present study was to develop sustained release formulation of Capecitabine to maintain constant therapeutic levels of the drug for over 12 hrs. HPMC-K 100M, Sodium Carboxy Methyl Cellulose, Grewia gum, Almond gum were employed as polymers. The tablets were prepared by direct compression method. All the formulations were passed various physicochemical evaluation parameters and they were found to be within limits. Whereas from the dissolution studies it was evident that the formulation (C5) showed better and desired drug release pattern i.e., 99.9% in 12 hours. It contains the HPMC-K 100 M 1:1as sustained release material. It follows peppas release kinetics mechanism.

Key words: Capecitabine, HPMC-K 100 M, Sodium Carboxy Methyl Cellulose, Grewia gum, Almond gum, Sustained release system and Direct compression method.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCEU03

PREPARATION, CHARACTERIZATION AND EVALUATION OF BIOCOMPATIBLE TRANSFERRIN-CONJUGATED LIPOSOMES LOADED WITH RUBITECAN AS POTENTIAL ANTITUMOR DRUG DELIVERY SYSTEM

Farsiya Fatima*[1], Dr. M. Komala[2]

[1*]*Research Scholar, School of Pharmaceutical Sciences, VELS Institute of Science, Technology and Advanced Studies (VISTAS), Chennai 117,*

Asst Professor, Sultan ul Uloom College of Pharmacy, Hyderabad

[2]*Professor, School of Pharmaceutical Sciences, VELS Institute of Science, Technology and Advanced Studies (VISTAS), Chennai 117.*

Malignant cancer cells require more iron for development and rapid multiplication compared to normal cells, which can be provided by a high expression level of transferrin receptor (TfR). It is generally known that tumor cells express TfR at levels that are significantly greater than those of normal cells, making TfR an alluring target for cancer treatment. To explore the potential of this tumor induced expression of transferrin receptors for targeting drug carriers, in this study, I have developed and characterized liposome carriers containing rubitecan composed of DPPC, Cholesterol, DSPE-PEG2000, DSPE-PEG2000-Maleimide prepared by the lipid film hydration for targeted delivery to cancer cells.The transferrin decorated liposomes loaded with rubitecan (Tf-Lip/Rubi) were almost-spherical in shape with uniform particle size and distribution. Theyhad an average particle size of 139.97 ± 8.12 nm, a narrow polydispersity index of <0.2 andstable zeta potential of -24.2 ± 0.38 mV. The drug entrapment efficiency (EE) and drug loading (DL) of Tf-Lip/Dio were 88.94 ± 1.02% and 4.48 ± 0.25% respectively. Rubi-Lipo/Transferrin has demonstrated a prolonged and controlled release characterization of approximately 32% of the total rubitecan concentration after 72 h at 37^{o}C. Rubi-Lipo/Transferrin has reported a higher cytotoxic and anticancer efficacy after incubation for24 h in both HeLa cells and HepG2 cells than in non-modified liposomes. The increased anti-tumor property of Rubi-Lipo/Transferrin might be due to the enhanced intracellular uptake, which was correlated by laser scanning confocal microscopy and flow cytometry. The present study was successful in designing a stable liposomal delivery carrier for Rubitecan with a suitable size, high drug entrapment efficiency, sustained release characterization and tumor-targeted activity.

Key words: Cancer cells ,TFR, Liposome, Sustain release.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCEU04

FORMULATION, OPTIMIZATION AND INVITRO AND INVIVO BIOLOGICAL EVALUATION OF EUDRAGIT-S-100 NANOPARTICLES LOADED WITH CLOFARABINE AS POTENTIAL ANTITUMOR DRUG DELIVERY SYSTEM

Annapurna Anusha Kotwala[1*], Dr. Komala. M[1]

[1*] *Department of Pharmaceutics, School of Pharmaceutical Sciences, Vels Institute of science Technology and Advanced studies (VISTAS), Chennai-600117, Tamilnadu, India.*

Clofarabine is a second-generation purine nucleoside analogue with antineoplastic activity. The objective of this study was to prepare Eudragit-S-100 nanoparticles loaded with Clofarabine as potential antitumor drug delivery system. Nano-suspension of CLOFARABINE was prepared by Nano-precipitation method. Five Nano -suspension sample formulas were prepared using Nano-precipitation technique. The prepared formulations were characterized by parameters such as average diameter of Nanoparticles in suspension form, poly- dispersity index, zeta-potential and entrapment efficiency (EE) and in-vitro drug release studies. Furthermore, the cytotoxicity and cellular uptake of conjugated nanoparticles in to cancer cell linings were investigated.

Key words: Nanoparticles, Clofarabine, Nano-precipitation method, encapsulation efficiency.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCEU05

FORMULATION AND EVALUATION OF MULTIPURPOSE POLYHERBAL HAIR OIL

P. Harini[1*], T.Uma Maheswari[2], M.Vijayasri[3], P.Roja[4]

1,2,3,4 St.Paul's College of Pharmacy, Turkyamjal(V), R.R.Dist.TS,India,

The aim of present study involves preparation of multipurpose polyherbal hair oil using plant materials. The prepared polyherbal hair oil evaluated different parameters within the acceptable limits. Such as phytochemical screening, organoleptic characterization, specific gravity, pH, viscosity, acid value, saponification value, refractive index, and also stability study. Antimicrobial assay of the polyherbal hair oil was studied by the zone inhibition method. and these helps reduces dandruffs and scalp of hairs. And to provide nutrition's of hairs. The antioxidant activity of the oil was studied by DPPH radical scavenging activity. The primary skin irritation test is carried out. Hence, these polyherbal hair oil increases hair growth, reduces hair loss, providing protection against dandruff. Now-a-days increasing demand of herbal formulation than synthetic formulation. They have better safety and also fewer side effects. Polyherbal hair oil using various fresh leaves of Hibiscus rosasinensis, Aloe barbadensis leaf, and curry leaves, amla, shikekai. These formulations coconut oil as the base. Hair care products used both hair tonic as well as hair grooming aids.

Keywords: *polyherbal hair oil, antioxidant activity, antidandruff assay, herbs.*

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCEU 06

FORMULATION AND EVALUATION OF EMULGEL FOR A NSAID DRUG

G.Manasa[*1],G.Ganitha[2],L.Haritha[3],Dr.Nagaraju kandukoori[4]

1,2,3 B.Pharmacy IV Year, St Pauls College Of Pharmacy,Turkayamjal(V),R.R.Dist. TS,India

4.Assistant Professor,Department of Pharmaceutics,St. Pauls college of Pharmacy,Turkayamjal(V),R.R.Dist. TS,India.

Emulgel systems are currently attention to the pharmaceutical sectors because of their substantial potential to act as drug delivery vehicle by incorporating a broad range of drug molecules and higher stability compared to the other dosage form like cream, lotion, gel, etc. Emulsions are either available in an oil in water or water in oil type. These are prepared by the incorporation of the emulsion into the gel with constant stirring at a moderate speed. Incorporation of emulsion into a gel makes it a dual control release system, thereby, increasing its stability. It has better drug release if we compare to other topical drug delivery system. It is non greasy because of the presence of gel phase which enhances patient compliance. Gels has a major limitation for the delivery of hydrophobic drugs, so to overcome this limitation an emulsion-based approach is being used so that even a hydrophobic therapeutic drug can enjoy the unique properties of gels. In recent years, these have also been a great interest in the use of novel polymers. These emulgels are having major advantages on vesicular drug delivery systems as well as on conventional systems in various aspects. Various permeation enhancers can enhance the effect; due to this emulgels can be used as better topical drug delivery systems over current drug delivery systems. The emulsion can be use for analgesics and antifungal drugs.

Key words: *Emulgel, Analgesics, Patient compliance.*

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCEU07

FORMULATION AND EVALUATION OF DE-TANNING CREAM

G. Chandana*[1], G. Nikhil[2], B. Sai charan[3], Ms. Sowmya[4]

1, 2, 3 – B. Pharmacy IV year, St. Pauls college of pharmacy, Turkayamjal, Ranga Reddy

4- Assistant professor, Department of pharmaceutics, St. Pauls college of pharmacy, Turkayamjal, Ranga Reddy

Tanning is the action or activity of exposing one's skin to the sun in order to achieve a brown or darkened colour. It is natural body defense relying on melanin to help protect the skin from further injury. Melanin is a chemical pigment in the skin that absorbs ultraviolet radiation and limits its penetration into tissues. Once skin is exposed to UV radiation, it increases the production of melanin in an attempt to protect the skin from further damage. The increase in melanin may cause your skin tone to darken over the next 48 hours. Our hands are subjected to the maximum amount of sun exposure as they are rarely hidden from the harmful rays. This may cause an uneven skin tone and discoloration. To remove tan from hands, people may opt for harsh methods like bleaching their skin, but this causes further darkening and makes it rough and dry. Morinda citrifolia L. (commonly known as Noni) has been explored in ancient folk remedies with a wide range of therapeutic utility, including antibacterial, antiviral, antifungal, antitumour, analgesic, hypotensive, anti-inflammatory and immune enhancing effects. Evaluation test performed are pH of the cream, spreadiability, appearance.

Key words: Tanning, melanin, Morinda citrifolia.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCEU 08

SOLUBILITY ENHANCEMENT AND FORMULATION DEVELOPMENT OF MANGIFERIN

Badri Nagarani*[a] and Venkata Radha Gadela[b]

*[a]*Pharmaceutics Department, Srikrupa Institute of Pharmaceutical Sciences, Velikatta, Siddipet-502277, Telangana, India*

[b] *Department of Pharmaceutics, GITAM Institute of Pharmacy, GITAM (Deemed to be University), Rushikonda, Visakapatnam-530045,Andhra Pradesh, India*

The main intension of the present study is to enhance solubility and oral bioavailability of mangiferin naturally occurring bioactive compound having poor solubility by the different methods like kneading method and solvent evaporation method. The solid dispersions were made by using variety polymers like cross povidone, sodium starch glucolate, lecithin, *β*-cyclodextrin in ratios of 1:1, 1:2, 1:3, 1:4 and 1:5. Solid dispersions prepared by kneading method with sodium starch glycolate in 1:2 ratio shown maximum solubility of 791micrograms per ml (0.0791mg/ml) compared with pure drug 57 µg/ml (0.057mg/ml).The purpose of this was to design and evaluate Push-Pull osmotic ally controlled drug delivery system of mangiferin.pushpull osmotic pump tablets are bilayered tablets consisting of pull layer (Drug layer) and push layer (osmogen layer) coated with a semi permeable membrane containing water leaching and pore forming agents. Formulations were formulated using wet granulation technique.OPADRY CA was used as film forming polymer. Sodium chloride was used as osmotic agent. When such systems come in contact with the medium, the PEO forms viscous gel and controls the drug release, whereas sodium chloride increases the drug release. In push pull system. The push layer swells releasing the drug at controlled rate. All the precompression and post compression parameters showed within limits.

Key words: Push-Pull osmotically controlled drug delivery system, Bilayered tablets, Mangiferin,OPADRY CA.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCEU09

CAPITALISING THE MARKET OF COSMETICS WITH CHEMICALS-A THREAT TO MANKIND

Sifana ehtesham[1], Wasif Rana[2], Rachana Jha[3], K.Keerthi[4]

Department of Pharmaceutics, St Pauls College of Pharmacy, Osmania University Hyderabad.

On an average each one of us uses 0.04 kg of chemicals from our household product everyday. Consumer items contain a wide range of chemicals, but our knowledge of the exposure pathways and potential dangers to human health is still lacking. Customers unintentionally utilise items that contain harmful substances in their daily lives. The FDA has banned less than 20 chemical where as the European medicines agency has banned over 1300 chemicals and consider them toxic.

The one exception is that the law regards coal-tar hair colours differently. As long as a coal-tar hair dye carries a special warning statement on the label and instructions for a skin test, the FDA is not permitted by law to take action against it for safety grounds.

It's also crucial to realise that some cosmetics, even when applied properly, might be dangerous if done incorrectly. Cosmetics must include any usage instructions or cautionary language required to ensure that consumers use the goods safely. For instance, certain compounds might be risk-free in cleansers that we promptly wash off the skin, but not in cosmetics that we leave on the skin for hours. Similar to this, substances that are safe for use on hair or nails could be dangerous when applied to skin or in close proximity to the eyes.

According to FDA regulations, certain chemicals including methylene chloride, vinyl chloride, hexachlorophene, etc. are restricted due to their hazardous or carcinogenic effects on both humans and animals.The chemicals in our clothes and bed sheets are constantly absorbed into our bodies through the pores of our skin, which is the greatest organ in our bodies.

Although the modern products are convenient cheaper and more suitable for our lifestyle opt traditional and organic product that are tried and tested and proven to be safe.

Key Words: Detrimental chemicals, Benign rashes, Consumer product, Chemicals.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCEU10

PULMOSPHERES

V.Sindhuja,Y. Jhansi rani, Shams Umma Ammarah Aiman, Deepika B

B. Pharm 4th year, St.Pauls College of Pharmacy, Turkayamjal, Ranga Reddy (dist)

PULMOSPHERE are spherical particles, with pores that reduce the contact surface area between them and thus diminish the tendency to agglomerate. Particles are smaller than 5 μm, thus preventing deposition in the oropharynx and enabling the drug to be delivered successfully to the airway and alveoli. This technology enables rapid drug release using a device that requires little additional energy. Spray-dried Pulmosphere formulations comprise phospholipid -based small, porous particles. Drug(s) may be incorporated in or with PulmoSphere formulations in three formats: solution-, suspension-, and carrier-based systems. The multiple formats may be administered to the respiratory tract with multiple delivery systems, including portable inhalers (pressurized, metered-dose inhaler and dry-powder inhaler), nebulizers, and via liquid dose instillation in conjunction with partial liquid ventilation. The Pulmosphere platform (particles, formats, delivery systems) enables pulmonary delivery of a broad range of drugs independent of their physicochemical properties and lung dose. The engineered particles provide significant improvements in lung targeting and dose consistency, relative to current marketed inhalers. Over the past 20 years, solution-based spray dried powders have transformed inhaled product development, enabling aerosol delivery of a wider variety of molecules as dry powders. These include inhaled proteins for systemic action. To this end, a number of approaches have been developed to maintain the crystallinity of drugs throughout the spray drying process. One approach is to spray dry suspensions of micronized drug(s) from a liquid feed.

Keywords: Pumosphere, Porous particles, Targetting.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCEU11

FORMULATION AND EVALUATION POLY HERBAL ANTI -ACNE SOAP

N. Pallavi[1], MA. Rashid[1], P. Soujanya[1] , B.Suhasini[1]

[1]*St.Pauls College of Pharmacy, Turkayamjal, Ranga Reddy (dist)*

Now a day's herbal soap plays major role in the society. It avoids the pathogen infection caused by the environment. The main objective of the present study is to produce Anti Acne soap. Acne is a skin condition that occurs when your hair follicles become plugged with oil and dead skin cells. It causes whiteheads, blackheads or pimples. Acne is most common among teenagers, though it affects people of all ages. The Polyherbal soap is the one which contains nature herbal ingredients. Many herbal plants and products combine to form polyherbal product. These soaps arise to avoid the synthetic soap. This herbal soap reduces the side effect effects and gives good results to the human. Polyherbal soap was prepared by using extracts of Alovera, Turmeric, Ginseng and Amla and evaluated by using various evaluation parameters such as organoleptic characteristics, pH, foam height and retention, skin irritation and high temperature stability. Prepared Polyherbal soap having good appearance better cleansing and foaming effect. Shown good Anti -Microbial activity against various microorganisms.

Keywords: Acne,Polyherbal soap, formulation, Antimicrobial.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOL01

LONG-TERM IMPACT OF MYOSITIS – NEW INSIGHTS ON THE TREATMENT STRATEGIES

*[1]**Deepika Mekala**[1], Uppalwar Harish[2], Sailaja Rao P[3]

[1,2] Teegala Ram Reddy College of Pharmacy, Meerpet, Hyderabad -500097, Telangana, India, [3]Department of Pharmacology, Teegala Ram Reddy College of Pharmacy, Meerpet, Hyderabad-500097, Telangana, India.

Myositis is defined as chronic, progressive inflammation of the muscles, whereas few types are associated with skin rashes. Myositis is thought to be an autoimmune condition that causes the body to attack muscles. Researchers pinpoint the etiological factors of the disease and found them to be the infection and injury. Once it gets diagnosed with different relevant tests, the treatment starts. In fact, there is no cure for myositis, but if left untreated it causes death. However, some people are able to manage their symptoms well. Some may even experience partial or complete remission. In regard to the treatment, there are no specific medications that are available for the treatment of myositis. However, corticosteroids such as prednisone are often prescribed. This drug is prescribed in combination with immunosuppressant drugs such as azathioprine and methotrexate. Currently, numerous immunosuppressive and immunomodulatory therapeutic agents are available for the treatment of myositis. Glucocorticosteroids and immunosuppressants remain first-line therapy. Due to the nature of this disease, it may take several changes in therapy to find the right treatment plan. It is always better to work with the physician for the best course of action. Non-pharmacological treatments such as physical therapy, exercise, stretching, and yoga can help keep muscles strong and flexible and prevent muscle atrophy. Additionally, further research on the pathogenesis of myositis is required to understand it in a better way and predict the response to a specific treatment.

Key words: Myositis, etiology, treatment plan, Glucocorticosteroids, immunosuppressants.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOL02

NEW APPROCHES IN CANCER THERAPY BY MICRO/NANOBOTS

***[1]Harish Uppalwar**[1], Deepika Mekala[2] , NagaSravani P[3]

[1,2] Teegala Ram Reddy College of Pharmacy,Meerpet,Hyderabad-500097,Telangana ,India.

[3]Department of Pharmaceutical Analysis, Teegala Ram Reddy College of Pharmacy,Meerpet,Hyderabad-500097,Telangana ,India.

Cancer is one of the most intractable disease owing to its high mortality rate and lack of effective diagnostic and treatment tools. Effective treatment in cancer therapy can be achieved at an earlier stages of diagnosis at least before the stage of metastasis. Cancer therapy always intends an efficient targeted drug delivery system by using various novel approches as a part of its therapy. Nanobots are robots that carry out a very specific function and are 50-100 nm wide. They can be used very effectively for drug delivery. Normally drugs work through the entire body before they reach the disease-affected area. Nanobots are tiny biological machines that can delivery drugs to the target destination to make them more efficacious and reduce side effects. Nanobots might transport and distribute vast volumes of Anticancer medications into diseased cells without affecting normal cells, decreasing the adverse effects existing therapies such as chemotherapy damage. The ultimate development of this innovation which will be accomplished via a close partnership among specialists in Robotics, Medicines and nanotechnology will have significant influence on illness detection, therapy and prophylaxis. Research is still in progress to explore the future nanorobotics designing and architecture in fighting against the cancer.

Key words: Nanobots, Nanorobotics, Targeted drug delivery system, cancer therapy.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOL03

CRISPR/CAS9 SYSTEM IN BREAST CANCER THERAPY: ADVANCEMENT, LIMITATIONS AND FUTURE SCOPE

Shaik salman

Max Institute of Pharmaceutical Sciences, Khammam, Telangana

Cancer is one of the major causes of mortality worldwide; therefore it is considered a major health concern. Breast cancer is the most frequent type of cancer which affects women on a global scale. Various current treatment strategies have been implicated for breast cancer therapy that includes surgical removal, radiation therapy, hormonal therapy, chemotherapy, and targeted biological therapy. However, constant effort is being made to introduce novel therapies with minimal toxicity. Gene therapy is one of the promising tools, to rectify defective genes and cure various cancers. In recent years, a novel genome engineering technology, namely the clustered regularly interspaced short palindromic repeat (CRISPR)-associated protein-9 (Cas9) has emerged as a gene-editing tool and transformed genome-editing techniques in a wide range of biological domains including human cancer research and gene therapy. This could be attributed to its versatile characteristics such as high specificity, precision, time-saving and costeffective methodologies with minimal risk. In the present review, we highlight the role of CRISPR/Cas9 as a targeted therapy to tackle drug resistance, improve immunotherapy for breast cancer.

Key words: CRISPR/CAS9, cancer, Gene therapy, genome, chemotherapy.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOL04

POTENTIAL ROLE OF KETOGENIC DIET IN CANCER MANAGEMENT

D. Lavanya[1], K. Ramya1, M. Sneha[1], P.Sudhakar[2]

[1]St.Pauls College of Pharmacy, Turkyamjal, Hyderabad-501510, [2]Department of Pharmacology, St.Pauls College of Pharmacy, Turkyamjal, Hyderabad-501510

Metabolic reprogramming is a well-established hallmark of cancer. In contrast to normal differentiated cells, which rely primarily on mitochondrial oxidative phosphorylation to generate the energy needed for cellular processes, most cancer cells instead rely on aerobic glycolysis and lactic acid fermentation to produce energy regardless of oxygen levels and cellular proliferation is directly dependent on nutrient availability, and most mitogenic signals exert their influence on cell proliferation by regulating nutrient uptake and synthesis of DNA, RNA, protein, and lipids. Studies indicate that ketone bodies revert these metabolic adaptations in cancer cells in order to induce growth arrest and apoptosis. Ketone body is the bioactive metabolite of Ketogenic Diets (KDs), which is necessary and sufficient to account for the anti-cancer effect of KDs. Ketone bodies are traditionally viewed as metabolic substrates in carbohydrate restriction and are applied in the treatment of epilepsy and other neurodegenerative diseases. Recently, people have paid more attention to its application in the treatment for cancers. Compared to normal cells, cancer cells maintain a higher level of reactive oxygen species (ROS) due to the dysfunctional oxidative phosphorylation and they highly rely on glucose for glycolysis and pentose phosphate pathway (PPP) to against the oxidative stress. Based on tumour metabolism, ketogenic diets (low-carbohydrate, high-fat, and moderate protein) or ketone supplementation, as non-toxic therapeutic approaches, showed a positive therapeutic advantage in a broad range of malignancies.

Key words: Cancer management, metabolic reprogramming, Oxidative phosphorylation, Ketogenic diet.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOL05

DRUG INTERACTIONS

B.Sathvika[1], E Navya Pravala[2]

[1]St.Pauls College of Pharmacy, Turkyamjal, Hyderabad-501510, [2]Department of Pharmacology, St.Pauls College of Pharmacy, Turkyamjal, Hyderabad-501510

The topic of drug interactions has received a great deal of recent attention from healthcare communities worldwide. Drug interactions are one of the most commonest and unwanted effects exerted by drugs. These are of different types and depending upon the type; they show different effects on the body. They are of pharmacokinetic and pharmacodynamic type. Drug interactions if left untreated; may lead to serious complications. Drugs with a narrow therapeutic range or low therapeutic index are more likely to be the objects for serious drug interactions. Drug -Drug interactions are one of the most common causes of medication error in recent times. In particularly; poly therapy increases the complexity of therapeutic management and thereby the risk of clinically important Drug –Drug interactions; which can induce the development of adverse drug reactions or reduce the clinical efficacy. Adverse drug events account upto 5% of hospital admission per year and an increase in the length of hospital stay. Now, it is necessary to focus more on Drug interactions so that the severe complications can be subsided in early stages.

Key words: Drug interactions; pharmacodynamics; pharmacokinetics; adverse drug reaction; metabolism; effects of drugs.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOL06

HARNESSING THE IMMUNOSTIMULANT POTENCY OF CHEMOTHERAPEUTIC DRUGS

G. Tharun[*1], B. Sai Charan[1], K. Trishun Reddy[1], Md. Mohiuddin[1], Rahaman Shaik[2]

[1]*St. Pauls college of Pharmacy, Turkayamjal, HYderabad-501510,*

[2]*School of Pharmaceutical Education and Research, Jamia Hamdard, New Delhi-110062*

Cancer is widely considered to be a cell-autonomous genetic disease that results from alterations in oncogenes, upregulation of tumor proto-oncogenes and down regulation of tumor-suppressor genes. The tumor-cell microenvironment, the stroma and immunity also playing a major role in cancer. For historical reasons, drug discovery scientists for cancer therapy have neglected the possibility that immune reactions might contribute to the efficacy of treatment. In this we summarize current knowledge on the contribution of the immune system to conventional cancer therapies. Some therapeutic agents can elicit specific cellular responses that render tumor-cell death. Many of the therapeutic procedures that are used in oncology today can stimulate the immune response against tumor cells. Previously it was reported that most chemotherapeutic drugs have immunosuppressive side effects but emerging data from the ongoing cancer research proves that majority of anticancer drugs are destroying cancer cells either by inhibiting or killing the cancer cells or indirectly by stimulating the anticancer immune response against the tumor cells. Here we are underlining the immunostimulatory potency of anticancer drugs and their current application in Immuno-oncology research.

Key words: Anticancer, Oncogenes, Immuno-stimulation, Tumor.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOL07

IN VIVO SYNERGISTIC EFFECT OF PACLITAXEL AND CHLORPROMAZINE IN BENZENE INDUCED LEUKEMIA

Jatavath akhila[1], Hafsa Fatima[1], Mohd. Mohiuddin[1,] Rahaman Shaik[2]

[1] *St.Pauls College of Pharmacy, Turkymjal, Hyderabad-501510*

[2] *School of Pharmaceutical Education and Research, Jamia Hamdard, New Delhi-110062*

Paclitaxel is a chemotherapy medication used to treat different cancers. Chlorpromazine is an antipsychotic medication safe at high doses and by many routes. It is safe and effective for relief of terminal restlessness and dyspnea in advanced cancer. Benzene is an industrial solvent that, however constitutes occupation hazard leading to hematological disturbance and leukemia. Therefore potency of paclitaxel and chlorpromazine against benzene induced hematological and myeloid toxicity leading to leukemia was investigated in Wistar rat model. Pre-leukemic conditions were induced in Wister rats by intravenous administration of benzene solution. Established data from various research groups indicating that these agents having the promising potential to become an alternative for the existing research strategies in preclinical leukemic studies. Here we have used a non-chemotherapy drug in combination with a chemotherapeutic agent to treat Benzene induced leukemia. We have investigated the pharmacodynamic interactions between the antipsychotics drug, chlorpromazine and the chemotherapeutic agent, paclitaxel. Preliminary data from *invitro* and *invivo* studies revealed that there is a considerable synergism between the two agents which has to be evaluated in detail in future.

Key words: Paclitaxel, Chlorpromazine, Leukemia, Cancer, Wistar rats.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOL08

SYNERGISTIC EFFECT OF PACLITAXEL AND QUININE IN LEUKAEMIC WISTAR RATS

Deepika kappara[1], Madhugani Jayanthi[2], Rahaman Shaik[3]

[1,2] *St.Pauls college of Pharmacy, Turkymjal, Hyderabad-501510*

[3]*Research Scholar, School of Pharmaceutical Education and Research, Jamia Hamdard, New Delhi-110062*

Paclitaxel belongs to the group of drugs known as anti-microtubulin agents. It attacks the cell's microtubules, which are necessary for cell division. The chemotherapeutic drug paclitaxel (PTX), also known by the brand name Taxol, is used to treat several cancers. Included in this are pancreatic cancer, Kaposi's sarcoma, ovarian cancer, breast cancer, lung cancer, esophageal cancer, and cervical cancer. It has shown potency against different leukemias whereas Quinine, a naturally occurring alkaloid famous for curing malaria, shown a specific anti-proliferative activity against preclinical leukemic models. Quinine can be used safely as a potential reversing agent of MDR for the treatment of clinically resistant acute leukemias. Established data from various research groups indicating that these agents having the promising potential to become an alternative for the existing research strategies in preclinical leukemic studies. Here we have used a non-chemotherapy drug in combination with a chemotherapeutic agent to treat Benzene induced leukemia in Wistar rats. We have investigated the pharmacodynamic interactions between the antimalarial drug, quinine and the chemotherapeutic agent, paclitaxel. Preliminary data from *invitro* and *invivo* studies revealed that there is a considerable synergism between the two agents which has to be evaluated in detail.

Key words: Paclitaxel, Quinine, Leukemia, Cancer, Wistar rats.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOL09

IMMUNOTHERAPY IN CANCER

Kataru baala akhila[1], Madipeddi Akhila[2], Rahaman Shaik[3]

[1,2] *St.Pauls college of Pharmacy, Turkymjal, Hyderabad-501510*

[3] *Research Scholar, School of Pharmaceutical Education and Research, Jamia Hamdard, New Delhi-110062*

Immunotherapy is a sort of cancer treatment. It makes use of chemicals produced by the body or in a lab to strengthen the immune system and assist the body in locating and eliminating cancer cells. Numerous forms of cancer can be treated using immunotherapy. It may be used alone or in conjunction with other cancer treatments such as chemotherapy. Over the past two decades, significant progress has been made in the science of immunology. Numerous creative and promising new cancer therapies that manipulate the immune response are now possible thanks to a greater understanding of the molecular and cellular mechanisms governing the immune system. For instance, it has been demonstrated that toll-like receptor agonists enhance immune responses against malignancies. Additionally, numerous cell-based immunotherapies involving NK cells, T cells, and Dendritic cells have been developed. Additionally, a variety of monoclonal antibodies are being created to treat malignancies, and many of these antibodies have already shown outstanding clinical results. Tumors can be recognized by the immune system, and it also destroys a lot of early malignant cells. The tumor microenvironment, however, is immunosuppressive, and cancers develop to resist immune action. Various immunological checkpoints that support protective immunity and preserve tolerance control immune responses. T cell co-inhibitory pathways limit the intensity and length of immune responses, which in turn limits immune-mediated tissue damage, regulates the resolution of inflammation, and upholds tolerance to ward off autoimmune disease. These co-inhibitory pathways are used by tumors as a means of evading immune destruction. In a subgroup of patients with a range of tumor types, blockade of the PD-1 and CTLA-4 checkpoints is demonstrating to be an efficient and long-lasting cancer immunotherapy, and various combinations are further enhancing response rates. Here, we look at some of the immunotherapeutic methods being used or being tested to treat cancer, and we review the evidence that is currently available.

Key words: Immunotherapy; Cancer; Tumors; PD-1; CTLA-4.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOL10

TOWARDS PRECISION-THE JOURNEY OF ANTI CANCER DRUGS

Madipeddi akhila[1], Deepika Kappara[2], Rahaman Shaik[3]

[1,2] *St.Pauls college of Pharmacy, Turkymjal, Hyderabad-501510,*

[3] *Research Scholar, School of Pharmaceutical Education and Research, Jamia Hamdard, New Delhi-110062*

With the use of precision medicine, medical professionals may give and plan customized treatment for their patients based on the unique genes, proteins, and other components of each patient's body. This method is often referred to as tailored care or personalized medicine. Precision medicine in the context of cancer typically entails examining how alterations in certain genes or proteins in a patient's cancer cells may influence their care, such as their therapy options. In some circumstances, it can assist in making a more precise diagnosis and enhancing care. In order to more precisely target disease subgroups with novel therapeutics, precision medicine refers to the definition of disease at a higher resolution by genetic and other technologies. Genome sequencing has significant promise for improving cancer patient care through more accurate treatment targeting and enhanced diagnostic sensitivity. Analysing the cancer patients data at the genomic level and genes mutated in a particular cancer provides a big data. Understanding the data from genomic studies and changing the treatment plans in cancer therapy is the deciding factor behind the treatment outs. Other molecular measurements, such metabolomics and microbiomics, are still in their infancy and frequently haven't been verified in further cohorts. Facilitating fair access to genome tests, ensuring that clinical studies give strong evidence for novel medications and technology, empowering patients toward shared decision-making, and enabling doctors to comprehend genetic data.

Key words: Precision, Genomics, Anticancer drugs, sequencing, DNA-sequencing technology.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOL11

CHEMOIMMUNOTHERAPEUTICS IN CANCER

Madhugani jayanthi [1]; Ms. Gajjala Amulya[2]; Mr. Rahaman Shaik[3]

[1,2] *St.Pauls college of Pharmacy, Turkymjal, Hyderabad-501510*

[3] *Research Scholar, School of Pharmaceutical Education and Research, Jamia Hamdard, New Delhi-110062*

Chemotherapy and immunotherapy are two treatments for cancer that are frequently utilised. Both therapies use medications to halt the spread of cancer cells. Despite sharing the same objectives, they go about achieving them in different ways. Chemotherapy works directly on cancer cells to stop them from proliferating, whereas immunotherapy improves your immune system's capacity to target cancer cells besides stimulating antitumor immune responses. Because of their myelosuppressive effects, cancer chemotherapy medicines have generally been thought to be bad for immunity. However, mounting evidence indicates that conventional cancer chemotherapy's anticancer efficacy is partly due to its capacity to activate the innate and adaptive immune systems by causing immunologically active tumor cell death. The strategic development of chemoimmunotherapy treatment regimens that both maximise tumor regression and the antitumor immune response for the long-term clinical benefit of cancer patients will be made easier with an understanding of the cellular and molecular basis of the interactions between chemotherapy drugs and the immune system. Synergy between the two therapies is one of the main objectives; one therapy's impact will be amplified by the other, and vice versa. Currently, different clinical trials are being carried out with the combination of chemotherapeutics and immunotherapeutics for various types of cancers. Chemoimmunotherapy, which combines chemotherapeutics and immunotherapeutic medicines, has gained popularity as a prospective method of treating cancer due to the benefits of combining two different types of treatment mechanisms, lowering medication dosage, and boosting therapeutic impact.

Key words: Chemotherapy; Immunotherapy; Chemoimmnotherapeutics; Tumor; Synergy.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOL12

ANTI CANCER DRUG DEVELOPMENT – THE GRAND CHALLENGES

Gajjala amulya[1]; Kataru Baala Akhila[2]; Rahaman Shaik[3]

[1,2] *St.Pauls college of Pharmacy, Turkymjal, Hyderabad-501510*

[3] *Research Scholar, School of Pharmaceutical Education and Research, Jamia Hamdard, New Delhi-110062*

Our knowledge of the molecular and cellular biology of cancer has dramatically improved during the last three decades. The cost of bringing a new treatment to market is over US$1 billion, according to research, and the total success rate for oncology products in clinical development is estimated to be around 10%. Careful examination of the grand obstacles of developing anticancer drugs is necessary to comprehend the causes and identify potential treatments. According to recent updates in Oncology, Cancer drug development has some grand challenges in its life cycle. Understanding the oncological target in the context and disrupting the many cellular components of malignant tissues may be necessary for effective treatments. In most of the oncology product development, misinformation or lack of full understanding of the drug targets makes the failure of clinical trials. Second challenge is developing a predictive model in preclinical studies where selecting the animal model for subcutaneous or orthotopic implants ultimately decides the outcome of the research. Additionally, there seems to be a contradiction in the regulatory standards for cancer medicines, which might unintentionally results in high failure rate and apparent irrationality of the drug development process. One of the most difficult decisions that regulators must make is how to strike the right balance between therapeutic efficacy and safety in patients with malignant disease. The intensive screening methods, regulatory bodies, lack of understanding of the targets and unreliable animal models makes the anticancer drug development a “Holy Grain”.

Key words: Orthotopic; Oncology; Subcutaneous; Cancer Drug Development.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOL13

ANTI-DANDRUFF POWDERED SHAMPOO

1Ch.gouthami[1], G.Rama Krishna[2], D.Ramya[3], E.Navya Pravala[4]

1,2,3 St.Pauls college of Pharmacy, Turkymjal, Hyderabad-501510

4Department of Pharmacology, St.Pauls college of Pharmacy, Turkymjal, Hyderabad-501510

Dandruff is a common disorder affecting the scalp condition caused by yeast. Dandruff cannot be completely eliminated but can only be managed and effectively controlled. Shampoo is a hair care product used for the removal of oils, dirt, skin particles, dandruff, environmental pollutants and other contaminant particles that gradually build up in the hair. Herbal anti-dandruff shampoos were formulated using herbal based ingredients like lemon grass, amla, neem, shikakai, brahmi, ginger root, shatavari, hibiscus flower, rosemary leaves, methi powder, reetha. The formulated shampoos were subjected to evaluation parameters like visual inspection, washability, solubility, dirt dispersion, skin irritation, foaming ability and foaming stability. The main objective of this study was to eliminate harmful synthetic ingredient from anti-dandruff shampoo formulation and substitute them with a safe natural ingredients.

Key words: Herbal shampoo, Anti dandruff, Shikakai, Shatavari

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOL14

PHARMACOGENTICS

Uzma tahniyath[1], Nethala divya[2]

St Paul's college of pharmacy, Turkayamjal Hyderabad

Pharamacogentics, the study of how people respond differently to drug therapy based upon their makeup or genes. Diet, overall health, and environment also have significant influence on medication response, but none are stronger indicators of how you will process medication than your genetics. Utilising pharamcogentics allows a health care provider to choose the right drug and dose that are likely to work best for each individual patient. A patient medication to their unique genetic characteristics may one day replace the one size fits all approach to drug selection and dosing that is commonly used today. Currently over 250 prescription medication contain pharamacogentic information in their FDA approved labels. The labels information contains the identification of biomarkers the primary measurable indicators associated with a patient's specific condition. All the drugs will eventually leave the body by a process called elimination but the time that they stay active in your blood stream working ,is often determined by genetic variations that change the way your drug processing Enzymes work.

Key words: Paharmacogentics and Drug to drug interactions, adverse drug events (ADEs), food and Drug Administration (FDA), Hemolytic anemia.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOL15

DOSTARLIMAB AS AN ANTICANCE

Mothe.bhuvaneshwari*[1],Pasunoori.Pavani[2], Sumaiya Fatima[3], P.Sunil Kumar Chaitanya[4]

1,2,3St.Paul's college of pharmacy,Turkayamjal, Nagarjuna Sagar Road,501510

4Department of Pharmaceutical Chemistry, St.Paul's college of pharmacy,Turkayamjal, Hyderabad-501510

Dostarlimab (JEMPERLI) is a PD-1 monoclonal antibody for the treatment of adult patients, with mismatch repair deficient (dMMR), recurrent or advanced endometrial cancer that has progressed on or following prior therapy with a platinum-containing regimen. As determined by an FDA-approved test this indication was granted rapid approval based on the rate of tumor response and the duration of the response. Continued approval for this indication is conditioned on further confirmatory trials demonstrating and documenting clinical benefit. In June 2022, the clinical trial NCT04165772 reported a 100% remission rate for rectal cancer. This clinical trial brought proof that we can match a tumor and the genetics of what is driving it, with therapy. This clinical trial continues to enroll patient and is currently enrolling patients with gastric, prostate, and pancreatic cancers. Dostarlamib is being recommended for rectal cancer. The focus of this review is to summarize the existing knowledge regarding Dostarlimab and explore the possibilities of mono- and combination therapies.

Key words: anti-PD-1 antibody, dostarlimab, immunotherapy, clinical trials.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOL16

LURKING EFFECTS OF CHEMICAL-BASED LIPSTICKS – A FOCUS ON THE HAZARDOUS OUTCOME

*** 1 Lahari g,** 2 Aishwarya R, 3 Nithin P, 4Sailaja Rao P

1,2,3 Teegala Ram Reddy College of Pharmacy, Meerpet, Hyderabad, India-500097

4 Teegala Ram Reddy College of Pharmacy, Meerpet, Hyderabad, India-500097

Lipsticks contain a noxious mixture of petroleum-based chemicals, many of which have not been tested for safety. Some of the chemicals in lipstick are easily absorbed through the lips and each time the lips are licked; the chemicals are ingested in a small dose. Lips have a tiny layer of skin covering them, making them delicate and easily permeable to cosmetics. Lip skin doesn't have the same natural defenses as other types of skin because it lacks hair and sweat glands. Parabens are commonly found in lipsticks and can easily penetrate the skin. They are known to produce several side effects including depression and diarrhea. There are certain chemicals incorporated in the lipsticks methylparaben, poly paraben, retinyl palmitate, tocopheryl acetate, and dyes. The preservatives used in lipsticks can cause major damage such as skin irritation, wheezing, coughing, and irritation of the eyes. Whenever eat and drink with lipstick on, these enter the body and can make sick. Lipsticks also have high amounts of lead and cadmium. Using lipsticks can lead to other harmful effects like skin allergies, cancer, renal failure and, a disrupted endocrine system. Many brands have created beautiful, effective, non-toxic lipsticks using safe ingredients. It is not harmful to expose to small amounts of lipstick containing these ingredients, for those who apply lipstick on a daily basis and reapply it repeatedly throughout the day, better change to a more natural product.

Key words: Lipstick, hazardous effects, natural product.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOL17

A RANDOMIZED COMPARATIVE OPEN LABEL APPROACH TO STUDY THE EFFICACY OF FIXED DOSE COMBINATION OF MONTELUKAST LEVOCETIRIZINE AND AMBROXYL WITH LEVOCETIRIZINE AND MONTELUKAST IN PATIENTS SUFFERING WITH ASTHMA

Uma rani yadagiri*[1], Mary Manisha Mannam[2]

1 Assistant professor, St. Pauls College of Pharmacy, Turkayamjal, RR Dist., 501510
2 Research Scholar, Middlesex University, Hendon campus, NW4 4 BT, United Kingdom

Asthma (AZ-ma) is a chronic (long-term) lung disease that inflames and narrows the airways. Asthma causes recurring periods of wheezing (a whistling sound when you breathe), chest tightness, shortness of breath, and coughing. Asthma affects people of all ages, but it most often starts during childhood. In the United States, more than 25 million people are known to have asthma. About 7 million of these people are children. To study the efficacy of the fixed dose combination of ambroxyl, levocetirizine and montelukast in subjects suffering from asthma The results of this study indicate that, after four weeks of treatment the test drug shows the better efficacy in asthma condition. In conclusion combination of montelukast cetirizine and ambroxyl is found more effective than the combination of montelukast and cetirizine in improving pulmonary measures and asthma related symptoms in Indian asthmatic patients.

Key words: Asthma, Levocetrizine, Montelukast, Ambroxyl, Dose.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOL18

MISSING LOOP IN CANCER TREATMENT

Nimisha vegiraju[1], Rahman Shaik[2], Dr. M. kiranmai[3]

[1]*st Pauls College of Pharmacy, Turkayamjal, Hyderabad-501510*

[2]*Research scholar, School of Pharmaceutical Education and Research, Jamia Hamdard, New Delhi-110062*

[3]*Professor, St Pauls College of Pharmacy, Turkayamjal, Hyderabad-501510*

The purpose of our study was to characterize the causes of death among cancer patients by identifying the missing links in cancer treatment. Cancer is a leading cause of death worldwide, accounting for nearly 10 million deaths in 2020. The most common in 2020 (in terms of new cases of cancer) were: breast (2.26 million cases),lung (2.21 million cases),colorectal (1.93 million cases),prostate (1.41 million cases).number of deaths by cancer each year: breast (6,85,000 deaths),lung (1.80 million deaths),colorectal (9,16,000 deaths).inherited mutations responsible for cancer are:BRCA1 and BRCA2-breast cancer, EGFR or KRAS gene-lung and bronchial cancer,BRCA1,BRCA2/HOXB13-prostate cancer. The research focus on the precision treatment for cancer by targeting the mutants responsible for causing cancer. "We can actually use diet to make cancer treatment work better–instead of giving drugs that have side effects, by this we can decrease toxicity and we may get improved survival–just by changing the foods that we eat. Diet includes (herbal drugs) which act both as food and medicine and focusing on treating mutants which are the main reason for causing cancer.

Keywords: Cancer, Missing loop, BRCA1, BRCA2, Breast cancer, cases.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOL19

VITILIGO, SPONDYLITIS, AND CROHN'S DISEASE DIAGNOSED IN A SINGLE PATIENT IS CO-OCCURRENCE OR COINCIDENCE?!

Rahaman Shaik[*1], B Sreevani[2] , Dr. Kiranmai Mandava[3]

[*1]*Department of Pharmacology, SPER, Jamia Hamdard, New Delhi-110062*

[2]*Department of Pharmacy Practice, MRM College of Pharmacy, Hyderabad-501510*

[3]*Professor, St.Pauls College of Pharmacy Turkyamjal, Hyderabad-501510*

A patient with multiple autoimmune syndrome (MAS) has at least three clearly identifiable autoimmune disorders present at the same time. Genetic, immunological, hormonal, and environmental variables could all be involved in the pathogenesis of MAS, despite the lack of clarity around this process. Although there are three well-known subtypes of MAS, there have lately been a number of instances described that did not fit into any of these three categories. To the best of our knowledge, only one patient—who had a total of five autoimmune diseases—has had psoriasis, vitiligo, and Crohn's disease simultaneously recorded (alopecia areata and oral lichen planus in addition to the three conditions mentioned). In this article, we report a unique instance of MAS that included Spondylitis, vitiligo, and Crohn's disease and provide some that tumor necrosis factor-α may be associated with the pathogenesis of all three conditions.

Key words: Crohn's disease, Enteropathic Spondyloarthropathy, Autoimmune, Immunological, Vitiligo.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOG01

HORDENINE COMPOUND (*Hordeum vulgare* Linn): *INVITRO* EVALUATION, GENE EXPRESSION, AND MOLECULAR MODELING STUDIES.

Lavanya Athilli [1], Arumugam Balasubramaniam [2]

[1]*Research Scholar, Department of Pharmaceutics, Vels Institute of Science, Technology and Advanced Studies (VISTAS), Pallavaram, Chennai - 600117, Tamil Nadu, India;Assistant Professor, Department of Pharmacognosy, Sultan-ul-Uloom College of Pharmacy, Banjara Hills, Hyderabad,- 500034, Telangana, India.*

[2]*Professor, Department of Pharmaceutics, Vels Institute of Science, Technology and Advanced Studies (VISTAS), Pallavaram, Chennai - 600117, Tamil Nadu, India.*

The objective of this work is to perform the cell viability assay, cell proliferation assay, anti-inflammatory activity, gene expression studies, and molecular docking studies of compound hordenine. Methods followed are cell viability i.e. the cell growth rate is measured using a 3- (4, 5-dimethyl thiazol-2-yl)-2, 5-diphenyl tetrazolium bromide (MTT) proliferation assay, cell proliferation was assessed using flow cytometry, Estimation of Inflammatory Marker IL- 6 by enzyme-linked immunosorbent assay (ELISA test), Real-time polymerase chain reaction (RT-PCR) was used to measure mRNA amounts of matrix metalloproteinases (MMPs): MMP-1, and MMP-9, genes in keratinocytes. Molecular docking studies were performed by docking hordenine with MMP1 protein. The results showed as the percentage of proliferation is high with the lowest concentration of hordenine, when compared to other compounds. The compound hordenine on inflammation was significantly reduced when compared to rotenone. Cells treated with hordenine showed decreased IL-6 secretion. The results of our studies of MMP gene expression in cultured primary human keratinocytes treated with hordenine have shown upregulation of MMP gene expression in cultured keratinocytes. Hordenine has shown binding energy of -4.5 Kcal/mol. Based on the results we conclude that hordenine provides a favorable environment for the cells to multiply, and grow healthy for tissue repair of many complications.

Key words: Hordeum vulgare; MTT proliferation assay; Tissue Repair; Hordenine.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOG02

A REVIEW OF PHYTOCHEMISTRY AND PHARMACOLOGY ON *MORINGA OLEIFERA*

Shravani.k*[1], Dr. S. Hemalatha[2]

[1,2] *S. N.Vanita Pharmacy Mahavidyalaya, Tarnaka, Secunderabad-17, Telangana.*

Natural extracts have been of very interest since ancient times due to their enormous medicinal use and research attention. *Moringa oleifera* is well known as miracle tree as it consists of high nutritive values. Originally from India is widely distributed in many tropical regions, in the pacific region, west Africa as well as central America. India is the major supplier of Moringa worldwide, accounting for around 80% of global demand. It is a multipurpose plant cultivated for medicinal applications. It contains rich sources of Vit- A, B1, B2, B3 and C, It also has calcium, potassium, iron, magnesium, zinc and phospherus. Moringa species contain various phytoconstituents such as alkaloids, saponins,tannins, steroids.phenolic acids(gallic, vanillic and p-coumaric acids) and flavanoids(catechin), tocopherol ,glucosinolates and terpenes. Investigations of ethanol extract of the leaves gives lutein, B-carotene,phytyl fatty acids, esters, poly phenols, B- sitosterols,triglycerols,fatty acids and saturated hydrocarbons. Leaves were obtained by super critical extraction with CO2 using ethanol as a cosolvent, temperature 35-80 ^{0}C.The phenolic acids(gallic, vanillic and p- coumaric acids) and flavanoids(catechin) were identified in all extracts. Extracts obtained at 35 degrees shows the highest values of total phenolic compounds. The activities of plant include Anti-oxidants, anti-cancer, anti-microbial, anti-viral,anti- hyperglycemic,anti-hyperlipidemic,anti-inflammatory,anti-hypertension, anti-spasmodic and others. Due to covid-19 pandemic, the global *Moringa* products market size is estimated to be worth USD 5167.2 million in 2022. Leaf powder is expected to exceed USD 6 billion by 2025 on account of increasing demand in the dietary supplement and food applications.

Key words: Moringa oleifera; Vitamins; Antioxidant; Flavanoids; Co-solvent.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOG03

ROLE OF FLAVANOIDS IN TREATMENT OF ALZHEIMERS DISEASE

Hafsa Azmath Khan[1], Ms Khwaja Amtul Rauof[2]

[1,2] *Sultan-ul-Uloom College of Pharmacy, Mount Pleasant, 8-2, 249 to 267, Banjara Hills Rd Number 3, Banjara Hills, Hyderabad, Telangana 500034*

Alzheimer and Parkinson disease are neurodegenerative disorders affecting millions of people worldwide. These results due to progressive loss of neuron structure and function resulting in muscle weakness in which the cells undergo apoptosis which further leads to oxidative stress. Different phytochemicals are present and flavonoids being the most relevant to neurodegenerative disorder is considered to be effective in treating these conditions, that is it inhibits inflammatory mediators, activates antioxidant enzymes. They help maintain the endogenous antioxidant status of neurons, protecting them from neurodegeneration. These secondary metabolites contain anticholinesterases activity, Anti-aging, neuroprotective and free radical scavenging activity. They cross the blood brain barrier and show their desired effect. Molecular docking was applied to these natural products, that is the research group applied ligand-based-virtual screening together with structure based-virtual screening of 469 compounds of family Apocyanaceae. As a result only 9 showed effect against the AD and PD. Some of them include 16-demethoxycarbonyltetrahydrosecamine and usambarensine. Molecular docking was applied to natural products for Alzheimer's also in which Bioactive beta secretase-1 (BACE1) inhibitors are studied as targets. In this method docking of 14 molecules was done with and presented interactions with amino acid residues Thr292, Asp93, Asp289, Thr293, Gln134, Asn294, and Thr133. These compounds showed inhibitory activity with hydrophobic and hydrogen bonds. To conclude the study, the flavonoids show neuroprotective activity by binding to key targets for PD and AD. Based on the molecular docking studies the aspalathin,3-hydroxyflavone, butin were proved to be useful against Alzheimers disease

Key words: Alzheimer disease; Parkinson disease; Phytochemicals; Flavonoids.

SPCP/PCOG04

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

LEUCAS ASPERA -MEDICINAL PLANT: A REVIEW

P. Deekshitha*; Dr.S.Hemalatha

S. N. Vanita Pharmacy mahavidyalaya, Tarnaka, Secunderabad-17.

Plants are indispensable sources of medicine. Studies on natural products are aimed to determine medicinal value of plants by exploration of existing scientific knowledge,traditional uses and potential chemotherapeutic agents. Leucas aspera commonly known as Thumbai is distributed throughout India from Himalayas down to ceylon.The plant is used traditionally as an Antipyretic and Insecticide. The plant *Leucas aspera* possess significant medically active compounds which can be used as the source for the production of new drugs in the field of medicine. Phytochemicals are used as templates for lead optimization program which are intended to make safe and effective drugs. Hot water extract of Leucas aspera is used orally as stimulant, antihelmintic, laxative, and diaphoretic. It is also used orally for the treatment of headache, asthma, and bronchitis. Hot water extract of entire plant is also used to treat inflammation, dyspepsia, and jaundice. Entire plant extract is used orally to treat scabies, psoriasis, and snake bite. The plant is externally used as an insect repellent. *Leucas aspera* is externally used to fumigate dwellings. A handful of flowers roasted in ghee are given orally (5–10 g once a day) for treatment of cough and colds. The flowers are crushed and aroma is inhaled in the opposite nostril for the relief of migraine. The juice of leaves is used aurally for ear pain and for pus discharge from ear. The paste of leaves ground with chalk is applied to tooth cavity (periodontal) to prevent decay. The decoction of leaves is used nasally as an antivenin. Infusion of leaves is used externally to treat scabies. Leaf paste mixed with turmeric is used to heal wounds and boils.

Key words: Leucas Aspera; Thumba; Ethnomedica; Psoriasis.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOG05

NATURAL CREAM FOR HYPOPIGMENTATION

S.Mineesh Kumar [*1] , Mohammed Lubna [*2] , Ch.Akhila [3] , Dr.Somnath De [4]

St. Pauls College of Pharmacy, Turkayamjal, Hyderabad, Telangana-501510

Melasma is a commonly acquired hypermelanosis of facial skin due to various etiological factors including hormonal imbalance. Creams are considered to be an important part of cosmetics product as topical preparation from time immemorial due to their ease of application to the skin and also their removal. Pharmaceutical creams have variety of applications such as cleansing, beautifying, altering appearance to skin protection against hyperpigmentation which caused by high production of melasma on skin. Melasma is a commonly acquired hypermelanosis (hyperpigmentation) of facial skin due to various etiological factors including hormonal imbalance, although it affects to both men and women. The Anti-Dark spots cream is use to depigmentation, in reducing the production of melasma by the natural ingredient of ‘’glycyrrhizaglabra’’. The role of *Glycyrrhiza glabra* on skin is mainly attributed to its antioxidant activity particularly to its potent antioxidants liketriterpene, saponins, and flavonoids, skin whitening, depigmenting, lightening, anti-aging, anti-erythemic, anti-acne and have phytoprotection effects. We have a formulated a new anti dark spot cream that enables in lightening of dark spots. The physical evaluation parameters were full filled according to the guidelines of pharmaceutical evaluation . Validation and commercialization certria has to be taken care of in your future in research.

Key words : Hyperpigmentation, Melasma, Glycyrrhizaglabra, Antioxidants, Triterpene, Saponin, Flavonoids, Antiaging,.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOG06

PHYSICOCHEMICAL PROPERTIES OF HERBAL TEA

S. Deepika Kumari*[1], Ms. Varsha Sahu [2], Mr. P. Sai Kiran[3], Mr. Sareesh Kankanala[4]
St. Pauls college of Pharmacy, Hyderabad

Herbal tea infusions differ from one another in amounts and composition of different compounds such as polyphenols which are present in them. This can be a result of different manufacturing methods and standardised guidelines related to preparation procedures. The most common group of plant polyphenolic compounds are the flavinoids. Flavinoids have a basic structure consisting of 2 aromatic rings bound by 3 carbon atoms that form an oxygenated heterocycle, termed as the C6-C3-C6 configuration. Based on the type of heterocycle, flavinoids can be divided into 6 subclasses: flavonols, flavones, flavanones, flavanols, anthocyanins and isoflavones. To determine the polyphenolic content in five different commercially available and popular herbal tea infusions and investigate physicochemical properties of the herbal infusions using UV analysis and absorbance was studied.

Key words: Physicochemical Properties; Herbal Tea; Flavonoids; Absorbance.

SPCP/PCOG07

A REVIEW OF TRADITIONAL MEDICINE *TRIDAX PROCUMBENS*

Juveria Tahseen* [1] , Hafsa Fatima [2] , Ahesan Goni [3] P.Jagurthi
St. Paul's college of pharmacy, Turkayamjal, Hyderabad,-501510

Nature is a boon for treating so many different types of diseases. During ancient days traditional medicines are used for treatment of certain life threatening diseases. One among the traditional medicines is *Tridax procumbens*, a plant belonging to Asteraceace family known as " Ghamra". It is a flower bearing plant and commonly known as coat buttons. Geographically located in Maharashtra, Madhya Pradesh and tropical America. Tridax procumbens containing certain chemical constituents like alkaloids ,terpenoids ,flavonoids etc. It is also having chemicals like oleanolic acid, fumaric acid, fl-sitosterol, quercetin and isoquercetin .Flowers and leaves contains proteins -26%,fibers-17%,carbohydrates-39% . It is having therapeutic activities like antibacterial activity, antioxidant, anti-inflammatory activity, insecticidal,etc and leaf juice can be used for wound healing property. The review of this medicinal plant highlights the importance of chemical constituents and their pharmacological activities.

Key words: Tridax procumbens; Phytochemicls; Pharmacological; Importance.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOG08

ROBOTIC PILLS THE FUTURE OF PAINLESS DRUG DELIVERY

H.Srija D.Madhuri. Deepika.B

[1,2,3] *St.pauls college of pharmacy,Turkayamjal,Nagarjuna Sagar road 501510*

A robotic pill for oral delivery of biotherapeutics safety,tolerability and performance in healthy subjects. Biotherapeutics are highly efficacious, but the pain and inconvenience of chronic injections lead to poor patient compliance and compromise effective disease management. Despite innumerable attempts, oral delivery of biotherapeutics remains unsuccessful due to their degradation in the gastro intestinal environment and poor intestinal absorption. The orally ingestible robotic pill for drug delivery, protects the biotherapeutic drug pay load from digestion in the GI tract and auto injects it into the wall of the small intestines are insensate to sharp stimuli. The robotic pill considered as safe, well-tolerated and delivered therapeutic amount of a biotherapeutic with an unprecedented bioavailability with the current safe of the art therapy in oral biotherapeutic drug delivery.

Key words: Biotherapeutics; Robotic pil; Patient compliance; Drug delivery.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOG09

WASTE WATER TREATMENT BY MICROBIAL FUEL CELLS

V. Mounika[1], Mrs. P. Roja[2]

[1] Pharm-D III year student, St Pauls College of Pharmacy, Turkayamjal.

[2] Assistant Professor, Department of Pharmacology, St Pauls College of Pharmacy, TurkayamjalHyd-501510

The introduction and implementation of stringent standards for waste discharge into the environment has necessitated the need for the development of alternative waste treatment process. Waste waster sources are major cause for environmental pollution in surface and ground water bodies. Current waste water treatment technologies are not sustainable to meet the ever growing water sanitation needs due to rapid industrialization and pollution growth, simply because they are energy and cost intensive leaving latitude for development of technologies that are energy conservative or energy yielding. Microbial Fuel Cell in combination with municipal waste water as a source of microorganisms has the potential to become a promising sustainable technology of waste water treatment. MFC based waste water systems employ bioelectrochemical catalytic activity of microbes to produce electricity from the oxidation of organic and in some cases inorganic, substrates present in urban sewage, agricultural, dairy, food and industrial waste water. This poster provides an overview of some recent data relating to waste water effluent, and a set of process configurations in which MFCs could be useful to treat waste water and the major challenges that MFC technology still faces in terms of COD removal efficiency and the determination of real potential of MFC technology that provides energy- positive waste water treatment or management.

Key words-Waste water treatment, Microbial Fuel Cell, Energy yielding.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOG10

REGULATORY ASPECTS OF RADIOPHARMACY

Doma Vaishnavi*[1], Katikela Swetha[2], Ganta Sangeetha[3], Mr. Sareesh Kankanala

St. Paul's College of Pharmacy, Hyderabad-501510

Radiopharmaceuticals have been around for several decades. The increasing applications of radiopharmaceuticals have revolutionized diagnostics and therapeutic fields whilst at the same time specific regulatory requirements have evolved to ensure safety requirements. Review on International, EU and local regulations on radiopharmaceuticals. The identification of educational needs about awareness and protection of patients and Healthcare professionals can be guided.

Key words: Radiopharmaceuticals, Diagnostics And Therapeutic Fields, Regulatory Requirements.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOG11

CONVERSION OF SEA WATER FOR FARMING

Shaik shaizan

St Pauls College Of Pharmacy, Turkayamjal, Hyderabad-501510

The demand for non-conventional water resources in irrigated agriculture is being driven by growing water scarcity in arid and semi arid countries. According to reports, certain Mediterranean nations are using seawater desalination as a substitute water source to support agricultural productivity. It stands for a plentiful and reliable water source that effectively ends climatological and hydrological restrictions. However, early results indicate that a few crucial difficulties may prevent its widespread use for agriculture irrigation. First off, seawater desalination still has a high energy need, which drives up production price significantly compared to alternative agricultural water sources. In addition, the high greenhouse gas emissions brought on by the excessive use of energy may make climate change worse. The absence of desalinated saltwater quality requirements also raises significant agronomic issues that, if not handled appropriately, could pose threats to agricultural production and the soil environment. These risks for crop irrigation may be reduced by specific quality rules for desalinated saltwater production, blending and management modelling, on-farm technical tools, and water and soil monitoring. This study examines the most crucial issues to think about, with an emphasis on the agronomical elements, and assesses current irrigation experiences using desalinated seawater.

Key words: Non conventional , Greenland, desalination, climatological, agronomical.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOG12

ISOLATION OF NOVEL UNCULTIVABLE STREPTOMYCES SPS IICT A475 FROM SVWLS, TIRUPATHI: IDENTIFICATION AND CHARACTERIZATION OF BIOACTIVE MOLECULES

Parinita Mitchelle M [1], Uma Rajeswari B [2] , R S Prakasham [3]

[1] *Organic Synthesis and Process Chemistry, CSIR-Indian Institute of Chemical Technology, Hyderabad- 500007.*

[2] *School of Biosciences and Technology, Vellore Institute of Technology, Vellore- 632014.*

Antimicrobial resistance (AMR) is a life threatening global health emergency, hence there is a need to investigate new sources of antibiotics to combat resistant pathogens. Exploitation of actinobacteria as a source of bioactive compounds to combat resistant pathogens has been encouraged since decades owing to the above reasons. However, availability of limited bacterial diversity (cultivable) for laboratory cultivation restricts the discovery of novel antibiotics.Therefore, the present study has focused on isolating novel uncultivable microbes from the soil in Sri Venkateshwara Wild Life Sanctuary (SVWLS) – Talakona, Tirupati, Andhra Pradesh using the i-chip as a cultivation tool. A novel Streptomyces sps IICT A475 was isolated and the bioassay guided fractionation of culture broth has shown potent anti mycobacterial activity towards Mycobacterium smegmatis with a zone of inhibition of 21 mm. It also has xanthine oxidase (XO) inhibition potential (bovine milk XO) with an IC 50 value of 25 µg/ml. The results from the ribotyping and phylogenetic tree analysis revealed that the isolated microbe belongs to an unclassified species of Streptomyces sp. strain IC12A & MM108 as well as with two other species Streptomyces sp BH-MK-02 & L4_7_907R. This strain bears close relativeness to Streptomyces aureus strain NBRC 100912 & BT63. Further, the fermentation broth was extracted and purified for lead molecules that showed anti mycobacterial and XO inhibition potential. Further studies towards statistical optimization of bioactive metabolites production, structural elucidation and bioactive mechanistic aspects are in progress.

Key words: Actinobacteria, Streptomyces sps, Xanthine oxidase inhibition, Anti mycobacterial activity, i-chip.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOG13

STEM CELL THERAPY: A BOON TO HUMANS NEURODEGENERATIVE DISORDERS.

R.Rahul,Umama tabassum, Sadikul.Sk, Mrs.Kadimcharla Keerthi

St Pauls college of Pharmacy, Turkayamjal,Hyderabad-501510

Stem cells are undeveloped cells with a protracted potential for self-renewal and the capacity to specialise into different cell types or all of the body's cells, depending on their origin. The capacity of stem cells to develop into particular cell types. Perpetual self-renewal and the capacity to develop into a particular adult cell type are the two features that distinguish stem cells from other types of cells. The two main categories of stem cells are multipotent, which can only differentiate into a smaller population of cells, and pluripotent, which can differentiate into any adult body cell. The discussion covers cell origins, traits, differentiation, and therapeutic uses. There is a lot to learn about the biology, handling, and safety of stem cells before they can be used effectively for tissue regeneration and repair. Transplantation of stem cells or their derivatives, and mobilization of endogenous stem cells within the adult brain, have been proposed as future therapies for neurodegenerative diseases. It may seem unrealistic, though, to induce functional recovery by replacing cells lost through disease, considering the complexity of human brain structure and function. Studies in animal models have nevertheless demonstrated that neuronal replacement and partial reconstruction of damaged neuronal circuitry is possible. There is also evidence from clinical trials that cell replacement in the diseased human brain can lead to symptomatic relief.

Key words: Stem Cells, Cardiomyopathy Syndrome, Neurodegenerative Diseases.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOG14

PLANTAE:HARNESSING THE PLANT KINGDOM AGAINST LEUKEMIA

S.Anusha [1], Rahaman Shaik [2] , Prof.Kiranmai Mandava [3]

[1]*St.Pauls College Of Pharmacy, Turkayamjal, Hyderabad-501510*

[2]*Reseach Scholar, School of Pharmaceutical Education and Research, Jamai Hamdard, New Delhi-110062*

[3]*Professor, St.Pauls College of Pharmacy, Turkayamjal, Hyderabad- 501510*

Leukemia is a leukocyte cancer that is characterized by anarchic growth of immature immune cells in the bone marrow, blood and spleen. There are many forms of leukemia, and the best course of therapy and the chance of a patient's survival depend on the type of leukemic disease. Different forms of drugs have been used to treat leukemia. Due to the adverse effects associated with such therapies and drug resistance, the search for safer and more effective drugs remains one of the most challenging areas of research. Medicinal plants have proven to be an effective natural source of anti-leukemic drugs. Thus, new therapeutic approaches are important to improving outcomes. Medicinal herbs have symbolized safety in contrast to the synthetic treatment (chemotherapy and radiotherapy). Almost half of the drugs utilized nowadays in treating cancer are from natural products and their derivatives. They play an essential role the treatment of cancer. Effort has been made throughout this comprehensive review to highlight the recent developments and milestones achieved in leukemia therapies using plant derived compounds and the crude extracts from various medicinal plants. Furthermore, the mechanisms of action of these plants are discussed. In patients with cancer the usage of complementary and alternatuve medicine is the first desirable treatment with lesser side effects and minimal adverse effects as compared to the synthetic one.

Key words: Leukemia, Medicinal Plants, Anti-leukemia, Alternative medicines.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOG15

MARINE DRUG

M.Sreepadha Sharma*,Mr.Santhosh

St.Pauls College Of Pharmacy, Turkayamjal, Hyderabad-501510

Marine drugs has no restrictions on the length of manuscripts, provided that the text is concise and comprehensive. Full experimental details must be provided so that the results can be reproduced. Marine drugs requires that authors publish all experimental controls and make full datasets available where possiblewhat are uses of the marine drugs .what are the applications of these drugs.in which form are these drugs used, what is the classification of marine drugs.what are the different sources of Marine drugs.

Key words: Marine Drugs,Classification,Application,Comprehensive,Uses.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOG16

REVIEW ON ANTI-CANCER AGENT FOUND IN SOFT CORALS

***P.Sravya,** I.Madhupriya, V.Hasini, P.Swarna, V.Vindhya, B.Sreedevi

Department Of Pharmaceutical Chemistry ,Teegala Ram Reddy College Of Pharmacy, Ranga Reddy, Telangana

Corals have served as an excellent target taxon for bioprospecting . The earth's surface is covered by ~70% water and contains 80% of all life found on the planet. It is no wonder then that the ocean has been and still is a source of food, let alone a vast source of therapeutic molecules. Soft corals have yielded therapeutic benefits, particularly as derived from soft and hard corals. Several applications have already been demonstrated, including anti-inflammatory properties, anticancer properties, bone repair, and neurological benefits.

Key words: Soft Corals; Benefits: Moelcules: Properties.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOG17

ARTIFICIAL INTELLIGENCE – A CHANGE IN PHARMA INDUSTRY

B. Gayathri, Almira Aiman

St Pauls College of Pharmacy,Hyderabad-501510

AI stands for artificial intelligence which refers to systems or machines that mimic human intelligence to perform tasks and can relatively improve themselves based on the information they collect. Although AI brings up images of high functioning, human-like robots taking over the world, AI isn't intended to replace humans. It intends to significantly enhance human capabilities and contributions Artificial intelligence for faster drug discovery and design The results are great cost savings that would indeed lower the drug costs for patients. Pharma companies deal with large volumes of textual data from various sources like patient reports, drug reports, etc . For researchers processing and interpreting these large volumes of textual data can be time consuming and tiresome. Applications and benefits of artificial intelligence in pharmaceutical industry include manufacturing process improvement, drug discovery and design , in processing biomedical and clinical data , research of rare diseases and personalized medicines and it is used in clinical trails.

Keywords: AI;Pharma industry;Applications.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOG18

"DRINKABLE BOOK" TURNS DIRTY WATER CLEAN FOR A THIRSTY WORLD.

M.A. Sai Samyuktha, [1] K. Nikhitha, [2] P. Roja[3]

1 B Pharm III Year, St Pauls College of Pharmacy.

2 Assistant. Professor, Department of Pharmacology.

One of the biggest problems in the developing world is access to safe, reliable drinking water. Currently, about 769 million people around the world lack access to clean and safe water, of which 358 million out of them are from Africa. 82 percent of these people live in rural areas. In addition, according to the World Health Organization, over 3.4 million people die annually from water borne diseases such as typhoid or diarrheal illness. One of the innovative idea to eradicate such water borne diseases is to use "Drinkable books", it combines a variety of technology to achieve this goal. On each of its tear-out pages, water safety tips are written in various language. The papers are impregnated with silver nano particles which can turn the dirty water into clean water by killing water borne bacteria. Each paper can last for weeks and one book is said to give 5,000 liters of clean drinking water for a single person which lasts upto 4 years.

Key words: Drinkable book, Paper filter water, Bacteria, Silver nano particles.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PCOG20

FORMULATION AND EVALUATION OF HERBAL CANDY FROM *AEGLE MARMELOS* FRUIT PULP AGAINST COLON CANCER

Kadali Monika Lakshmi[1], Burra Vaishnavi[2], Bathini Udaykiran[3], Pathakota Roja*

St Pauls College of Pharmacy,Hyderabad-501510

Colorectal cancer is one of the main causes of cancer-related mortality in the developed world. Carcinogenesis is a multistage process conventionally defined by the initiation, promotion and progression stages. Natural polyphenolic compounds can act as highly effective antioxidant and chemo-preventive agents able to interfere at the three stages of cancer Bael (Aegle marmelos L.) is an important indigenous fruit of India, belonging to family Rutaceae. Aegle marmelos has been demonstrated to counteract oxidative stress and to have a potential capacity to interact with multiple steps in carcinogenic pathways like inflammation, proliferation. Abberent crypt formation and apoptosis. Based on the in vitro and in vivo studies it has proved that degle marmelos has anti cancer activity against colon cancer Now the present study is aimed to formulate and evaluate the candies of Aegle marmelos fruit pulp against colon cancer. .The Bael candy was prepared from healthy and mature Bael fruits and evaluated.

Key words: Bael, candy, organoleptic quality. Colon cancer. Aegle marmelos.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPC01

SYNTHESIS, CHARACTERIZATION AND CYTOTOXICITY STUDIES OF NOVEL 1,5-BENZOTHIAZEPINES USING MTT ASSAY

Praveen Kumar Borra[1,2,*], Phool Chandra[3], Vidyadhara Suryadevara[4], Neetu Sachan[5]

[1]*School of Pharmaceutical Sciences, Faculty of Pharmacy, IFTM University, Lodhipur Rajput, Delhi Road, Moradabad (UP)-244102, India*
[2]*Department of Pharmaceutical Chemistry, Sultan-ul-Uloom College of Pharmacy, Hyderabad-500034, Telangana, India*
[3]*Teerthanker Mahaveer College of Pharmacy, TeerthankerMahaveer University, Delhi Road, Moradabad (UP)-244001, India*
[4]*Chebrolu Hanumaiah Institute of Pharmaceutical Sciences, Guntur-522019, Andhra Pradesh, India*
[5]*Maharana Pratap College of Pharmacy, Kothi, Mandhana, Kanpur (UP)-209 217, India*

Fifteen benzothiazepine compounds were synthesised and their cytotoxicity was studied because of the significance of the benzothiazepinepharmacophore.Benzothiazepines were synthesised by combined 0.01 mol of 1,3-substituted prop-2-en-1-one, 0.01 mol of 2-aminothiophenol, 1.25 ml of water, and a pinch of zinc acetate as a catalyst in a conical flask. The solvent free reaction mixture was heated in a microwave oven for 2-3 minutes at a temperature of 80-85^{O}C. Products were filtered, dried, and recrystallized in ethanol after being washed in water to remove the catalyst. The characterization of compounds was done by using the IR, NMR and Mass spectroscopy. The in vivo cytotoxicity studies were performed using MTT assay method. Spectral data reveals the structure of the compound benzothiazepine. Of all the compounds tested against HT-29 cell lines, the compound BT-09 having a nitrophenyl moiety in its structure showed maximum activity with a IC_{50} value of 28 µg/mLAmong the compounds tested for cytotoxicity on MCF-7 cell lines, the compound BT-09 showed maximum activity (IC_{50} 27 µg/mL). Among the compounds tested for cytotoxicity on DU-145 cell lines, the compounds, BT-09 and BT-11 showed maximum activity (IC_{50} 16 µg/mL). It was also observed that among all the compounds tested on these three cell lines, most of the compounds showed maximum activity on prostate cancer cell lines (DU-145).The cytotoxic results showed that the compound BT-09 with a nitrophenyl moiety in its structure was the most effective against the HT-29 cell line, MCF-7 cell line, and DU-145 cell line, with an IC_{50} value of 28 g/mL, 27 g/mL, and 16 g/mL, respectively.

Key words: benzothiazepine, IR, NMR and Mass spectroscopy.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPC02

MICROWAVE ASSISTED ORGANIC SYNTHESIS

R. Mouna*, N. Niharika*

St. Pauls college of Pharmacy, Turkyamjal, Hyderabad

Microwave assisted organic synthesis is an enabling technology for accelerating drug discovery and development processes. microwave organic synthesis opens up new opportunities to the synthetic chemist in the form of new reaction that are not possible by conventional heating and serve a flexible platform for chemical reaction. This abstract focusses on the advances in the developing of innovative application of microwave mediated synthesis. The efficiency of microwave flash-heating chemistry in dramatically reducing reaction times (reduced from days and hours to minutes and seconds) has recently been proven in several different fields of organic chemistry. The time saved by using focused microwaves in potentially important in traditional organic synthesis but could be of even greater importance in high speed combinatorial and medicinal chemistry. The study presents examples that demonstrate the significance of these advantages in industrial application.

Key words: microwave, green synthesis, organic synthesis.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPC03

PHARMACEUTICAL APPLICATIONS OF MECHANOCHEMISTRY - "GREEN SYNTHESIS, CATALYSIS, DETOXIFICATION, CuNP(s), NSAIDS/ OTHER DRUGS DEVELOPMENT"

[*1] **ShifaNoorani,** P. Salome SatyaVani

[*1]*Sri Venkateshwara College of Pharmacy, Madhapur, Hyderabad, TelanganaState,India*

Mechanochemistry is the field of chemistry that deals with the direct conversion of chemical into mechanical energy. The hallmark of mechanochemistry is achieving chemical transformations by milling or grinding, without/ very little solvent (Liquid Assisted Grinding). Mechanochemical synthesis of Copper Nanoparticles is achieved by 3hr mechanochemical processing without subsequent annealing during the process. Copper complexes with NSAIDS like Ibuprofen, Naproxen etc. are proven to be non-ulcerogenic, with enhanced bioavailability and potential to alter dissolution rates. Mechanochemical reduction of binary sulphides'-chalcocite (Cu2S), covellite (CuS) by elemental iron after 360 min of planetary ball milling obtaining copper NPs. These (Cu^{+2}) NPs complexes of all anti-epileptic drugs are more effective and less toxic than their parent drugs. Copper NPs exhibit powerful broad antimicrobial spectrum with an antibacterial effect against periodontal pathogens. Mechanochemical treatment of expired ibuprofen with Al(OH)3 causes loss in its pharmaceutical activity and toxicity, the degradation reaction path and products have been identified by means of FT-IR spectroscopy, TLC, elemental analysis, detoxifying API for environment safety. Green synthesis of copper and copper oxide NPs by mechanochemical methods is economically beneficial and eco-friendly, exhibiting anti-cancerous, antioxidant, anti-microbial, wound healing property, potent cytotoxicity, "contact killing". The major inspiration behind rediscovery of mechanochemistry is green chemistry, specifically the need of pharmaceutical and chemical industries for cleaner, safer, efficient transformations.

Key words: Liquid Assisted Grinding, Copper Nanoparticles, non-ulcerogenic, detoxifying API, Green synthesis, contact killing, rediscovery.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPA-1

STABILITY INDICATING METHOD DEVELOPMENT ANDVALIDATION OF URIDINE TRIACETATE IN BULK AND MARKETEDPHARMACEUTICAL DOSAGE FORM BY USING UPLC METHOD ASPER ICH GUIDELINES

KoduruSwathi*, Dr. H. Padmalatha, Dr.Rakesh K. Jat

Department of Pharmaceutical Analysis
ShriJagadish Prasad JhabarmalTibrewala University
BojjamNarasimhulu Pharmacy College for Women

A simple, precise, accurate method was developed for the estimation of UridineTriacetate in bulk form and marketed pharmaceutical dosage form by UPLC technique.0.1% OPA Buffer and Acetonitrile in the ratio of 30:70% v/v used as mobile phaserun through BHEL UPLC Column with a flow rate of 0.25 ml/min. The temperature of thecolumn oven was maintained at Ambient. Wavelength was selected 256 nm. Stock and workingsolutions were prepared by using the diluents 0.1% OPA Buffer and Acetonitrile in the ratio of30:70% v/v. Runtime was fixed to 2 min. Uridine Triacetate was eluted at 0.439 min with good resolution the plate count, tailingfactor and all system suitability parameters are within ICH range. Uridine Triacetate was foundto be linear low in concentration range of 6-14µg/ ml in the linearity study, regression equationand coefficient of correlation for Uridine Triacetate was found to be (y = 52539x+2641.7 r2 =0.9999). Percentage recovery for Uridine Triacetate was found in range of 98%-102% indicatingaccuracy of the proposed work. Assay of the marketed pharmaceutical dosage form wasperformed and found as 99.968%.All the parameters were within the ICH guidelines and the developed method waseconomical and simple as retention time was less than in literature and decreased run time.

Key words: Uridine Triacetate, UPLC, Method Development, Validation, ICH Guidelines.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPA-2

A Review OnRole of total dissolved solids[TDS]in water for better health

M.Vineela, T.Sai Vikas, T.Kusuma Teja, K.Keerthi

Department of Pharmaceutical Analysis
St Pauls College of Pharmacy, Turkayamjal,Hyderabad.

Total dissolved solids (TDS) is a measure of the dissolved combined content of all inorganic and organic substances present in a liquid in molecular, ionized, or micro-granular (colloidal sol) suspended form. Generally, the operational definition is that the solids must be small enough to survive filtration through a filter with 2-micrometer (nominal size, or smaller) pores. Total dissolved solids are normally discussed only for freshwater systems, as salinity includes some of the ions constituting the definition of TDS. The principal application of TDS is in the study of water quality for streams, rivers, and lakes. Although TDS is not generally considered a primary pollutant (e.g. it is not deemed to be associated with health effects), it is used as an indication of aesthetic characteristics of drinking water and as an aggregate indicator of the presence of a broad array of chemical contaminant primary sources for TDS in receiving waters areagriculture and residential [urban] run off, clay-rich mountain waters, leaching soil contamination, and point source water pollution discharge from industrial or sewage treatment plants. The most common chemical constituents are calcium,phosphates,nitrates,sodium,potassium and chloride, which are found in nutrient runoff, general storm water runoff and runoff from snowy climates where road de-icing salts are applied. The chemicals may be cations,anions and molecules or agglomerations on the order of one thousand or fewer molecules, so long as a soluble microgranules is formed. More exotic and harmful elements of TDS are pesticides arising from surface runoff. Certain naturally occurring total dissolved solids arise from the weathering and dissolution of rocks and soils. The United States has established a secondary water quality standard of 500 mg/L to provide for palatability of drinking water.Total dissolved solids are differentiated from total suspended solids (TSS), in that the latter cannot pass through a sieve of 2 micrometers and yet are indefinitely suspended in solution. The term *settleable solids* refers to material of any size that will not remain suspended or dissolved in a holding tank not subject to motion, and excludes both TDS and TSS.[2] Settleable solids may include larger particulate matter or insoluble molecules.

Key words: water pollution,settleablesolids,storm water, elements, icing saltsetc.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP01

A PHARMACOVIGILANCE APPROACH IN ADVERSE DRUG REACTION SURVEILLANCE AMONGST OLDER ADULTS.

Ascharya Chintalapati[1], Madhan Ramesh[2]

[1]*Research Scholar (PhD), Department of Pharmacy Practice, JSS College of Pharmacy, JSS AHER, Mysuru.*
[2] *Professor, Department of Pharmacy Practice, JSS College of Pharmacy, JSS AHER, Mysuru.*

Adverse Drug Reactions (ADRs) significantly contribute to the economic burden in the hospital setting. A Prospective Surveillance study was conducted for a period of 6 months. In the present study it was found that a total of 759 geriatrics were admitted to the hospital during the study period. Out of which 274 geriatric patients were eligible and gave consent in which 74 patients developed 94 ADRs with an incidence of 9.75%. Of the study population, a total of 63 (67.02%) and 9 patients (9.57%) were from the age of 60 -74 years and 75 - 80 years respectively. 40 (54.05%) patients had no comorbidities. The average length of the hospital stay and the average duration of ADRs was found to be 8.91 days and 3.5 days respectively. The most common reaction and drug was Thrombocytopenia (8.51%) and Paclitaxel (8.51%) Out of the 94 reported ADRs, 72 (76.6%) were probable (WHO Scale), 78 (82.98%) were not preventable, 53 (56.38%) were not predictable. 79 (84.04%) were not serious, 46 (48.94%) level 3 severity. Among the reported ADRs in 56 (59.57%) patients drug was withdrawn and 48 (51.06%) did not receive any treatment. ADR management in hospitals should place a strong emphasis on promoting patient safety. A system for defining, evaluating, and tracking the quality of ADR management must be created. The effectiveness of the ADR management process could be enhanced by educational strategies.

Key words: Adverse drug reaction, Older adults, Surveillance.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP02

PERSONALIZED MEDICINE

Arjumand Begum Nooreen*[1]

[1]*Department of Pharmacy Practice, Deccan School of Pharmacy*

The presentation discuss the concept of personalized medicine, with brief introduction of Pharmacogenetic and biomarkers. Personalized medicine (PM) has the potential to tailor therapy with the best response and highest safety margin to ensure better patient care. Pharmacogenetic tests, along with other information about patients and their disease or condition, can play an important role in drug therapy. When a health care provider is considering prescribing a drug, knowledge of a patient's genotype may be used to aid in determining a therapeutic strategy, determining an appropriate dosage, or assessing the likelihood of benefit or toxicity. Biomarkers are features that can be objectively measured and used as indicators of normal or pathogenic biological processes, as well as for pharmacological responses to therapeutic treatment. So, they serve as a reference for various processes in the body and give information's on the presence and the severity of the state of a disease. Biomarkers can rescue drugs by identifying the patients that respond to them. The presentation takes into account use of Herceptin as personalized medicine. Biology behind the biomarker is likely to improve treatment of breast cancer.

Key words: Medicine, Cancer, PM.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP03

MEDICATION ERRORS IN HEALTH CARE: A ROLE OF PHARMACISTS IN PREVENTION OF MEDICATION ERRORS

B. Yashaswi[1], J. Vyshnavi[2], Sailaja Rao P[3]

[1]*Teegala Ram Reddy College of Pharmacy, Meerpet, Hyderabad-500097, Telangana, India.*
[2]*Teegala Ram Reddy College of Pharmacy, Meerpet, Hyderabad-500097, Telangana, India.*
[3]*Professor, Department of Pharmacology, Teegala Ram Reddy College of Pharmacy,Meerpet, Hyderabad-500097,Telangana, India.*

A medication error is any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the health care professional, patient, or consumer.Medication errors are most common at the ordering or prescribing stage. Typical errors include the healthcare provider writing the wrong medication, the wrong route or dose, or the wrong frequency. These ordering errors account for almost 50% of medication errors. Data show that nurses and pharmacists identify anywhere from 30% to 70% of medication-ordering errors. It is obvious that medication errors are a pervasive problem, but the problem is preventable in most cases.Medication errors are grouped by different taxonomies by the Joint Commission, World Health Organization, and The National Coordinating Council for Medication Error Reporting and Prevention.Errors are classified according to their level of severity. These approaches are not mutually exclusive and there is no strong evidence to support particular methods of defining or classifying errors specifically in primary care.A clinical pharmacist's duties are to supervise the medication treatment of admitted patients and to notify the healthcare team when a discrepancy is found.

Key words:World Health Organization, Medication errors, primary care.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP04

CONSEQUENCES OF POOR GLYCEMIC CONTROL IN DIABETICS "EFFECT ON CAD"

ShivakumarPanuganti[1], Sreedevi bonagiri[2]

Department of Pharmaceutical chemistry, T.R.R College of pharmacy, Meerpet,Hyderabad.

Poor glycemic control (Hypoglycemia) causes a cascade of physiological effects and may induce oxidative stress and cardiac arrhythmias, contribute to sudden cardiac death, and cause ischemic cerebral damage, presenting several potential mechanisms through which acute and chronic episodes of hypoglycaemia may increase CVD risk. CAD are diseases of the arteries that supply the heart muscle with blood. CAD is one of the most common forms of heart disease and the leading cause of heart attacks, It generally means that blood flow through the coronay arteries has become obstructed the most common cause of such obstruction is a condition called atherosclerosis. Coronay artery disease can lead to other heart problems such as chest pain angina and heart attack (myocardial infaractions).

Key words: Hypoglycemia, coronay artery disease.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP05

PLATELET RICH PLASMA (PRP) THERAPY FOR OSTEOARTHRITIS.

Koppula Divya[1], Ponemoni Divyani[2], TadukaTaruni[3] ,C.Nagamani[4], Dr. A. SrinivasaRao [5].

[1]*Bhaskar Pharmacy College, Yenkapally, Moinabad, RRdist, Telangana, India.*

Platelet-rich plasma (PRP) is a concentrate of autologous blood growth factors which has been shown to provide some symptomatic relief in early osteoarthritis (OA) of the knee. The objective of this study was to test the feasibility and efficacy potential of platelet rich plasma (PRP): Platelet-rich plasma (PRP) injections are gaining popularity for a variety of conditions, from sports injuries to hair loss. The treatment uses a patient's own blood cells to accelerate healing in a specific area. Platelet-rich plasma consists of two elements: plasma, or the liquid portion of blood, and platelets, a type of blood cell that plays an important role in healing throughout the body. Platelets are well-known for their clotting abilities, but they also contain growth factors that can trigger cell reproduction and stimulate tissue regeneration or healing in the treated area. Platelet-rich plasma is simply blood that contains more platelets than normal.To create platelet-rich plasma, clinicians take a blood sample from the patient and place it into a device called a centrifuge that rapidly spins the sample, separating out the other components of the blood from the platelets and concentrating them within the plasma.Feasibility study to assess safety of the intervention procedures and assess primary and secondary outcome measures. Consecutive patients presenting with symptomatic knee OA were recruited in a primary care setting in Ireland. All participants received three injections of PRP 4 weeks apart. The following self-reported clinical outcomes were evaluated before and after therapy (4 months): Pain and disability; health utility; adverse events; patient satisfaction and goal-orientated outcomes.

Key words:Platelet-rich plasma (PRP),*osteoarthritis* (OA),*autologous,tissue regeneration.*

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP06

STUDY ON EGFR THERAPY IN NON SMALL CELL LUNG CANCER PATIENTS

Husna Rahman[1], Mariam Abdul Samad[1]

[1]*Sultan Ul Uloom College of Pharmacy, Banjara hills*

Lung cancer is a malignant lung tumor characterized by uncontrolled cell growth in tissues of the lungs. Non-small cell lung cancer (NSCLC) is the most common type of lung cancer. Epidermal Growth Factor Receptor (EGFR) therapies, including tyrosine kinase inhibitors (TKIs) and monoclonal antibodies bind to the extracellular domain of EGFR, preventing ligand binding and interrupting in the signaling cascade. Mutation of the EGFR is a major genetic driver of NSCLC. While first lineTKIs have improved patience survival, many patients eventually developed resistance to these drugs. Pathways that may synergise with EGFR signaling are of interest since a liability created with one compound may then be exploited by a second. It is well known that glycolysis is controlled by EGFR signaling in cancer cells. Using PC-9 cells which have known constitutive EGFR activation, we examine the relative poise of ATP production from mitochondria and glycolysis in response to any of the four different TKIs: Affinitive, co-1686,dacomitinib and erlotinib, rapid decrease in glycolytic activity was induced. However, the total ATP production rates were not changed significantly as a result of increased mitochondrial ATP production. Total ATP production rate is decreased and cell viability is followed. EGFR targeted therapy and mitochondrial targeted therapy may provide metabolic stress to cancer cells.

Keywords:*tumor, EGFR, Non small cell lung cancer (NSCLC), tyrosine kinase inhibitors (TKIS).*

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP07

CONCEPT OF UNIVERSAL BLOOD CREATION

Sairam pasam*[1]

[1]*B.Pharmacy, 4th Year, Samskruti College of pharmacy Hyderabad*

Everyday 12000 people in India die due to sheer lack of donating blood, maximum percentage of people nowadays are suffering from diabetes, high blood pressure and obesity so they are not grouped under Donor category so we should find an alternative thing to overcome this problem, what if we can create universal Donor blood from other blood groups, yes we can do that this is modern ongoing research in which scientists use enzymes extracted from different microorganisms to Cleve the unwanted sugar moiety from A-negative and B-negative blood group to convert them in to O-negative which is universal donor, the main moto of creating universal blood is it can be transfused to anyone without having any complications.

Key words: Universal blood, Blood, Blood donation.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP08

DEVELOPMENT OF PLANT BASED HAIR GEL TO OVERCOME ALOPECIA- A GLOBAL CONCERN FOR YOUTH

Juveria Farhath[1]

[1]*Department of Pharmacy practice, Sultan-Ul-Uloom College of Pharmacy, Hyderabad.*

Alopecia areata, Telogen effluvium is the current major issue in younger population. Hair loss could be due to various underlying conditions or due to stress and environmental factors. The aim of the study is to make evidence based formulation that can manage alopecia without the occurrence of adverse effects. The study involves the screening of ligands obtained from plants and performs molecular docking and selection of the compounds which are effective against the disease targets causing the progression of alopecia. Based on the docking results plant derivatives were separated using HPLC and various solvent extraction methods. Using the extracted compounds a gel formulation was made for topical use.The compounds selected are thought to be acting by inhibiting various targets which can cause the progression of alopecia and baldness.

Key words:Hair remedy, molecular docking, ligands, Alopecia areata, baldness, solvent extraction method.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP09

PCOS-POLYCYSTIC OVARY SYNDROME

K.Samyuktha[1], CH.Greeshma[2], N.Reshmitha[3]B.Suhasini[4]

[1]*St.Paul's College of Pharmacy, Turkayamjal, Ranga Reddy.*

Now a days PCOS is a common problem for teenage girls and women. We see early menstrual cycle occurrence at the age of 12 years of children. It is one of the common problem for most of the females. The females population 9% to 22% are effected with PCOS. Due to imbalance of hormones PCOS occurs in females. Mostly it occurs due to stress. To overcome this, now a days the teenagers and females are involved in workouts,exercise and yoga. The early menstruation is caused in children due to lot of stress and junk food. There are 4 types of PCOS.They are Insulin Resistant PCOS, Inflammatory PCOS, Hidden Cause PCOS, Pill Induced PCOS. PCOD treatment help you to manage your concerns, including infertility, hirsutism, acne, immature follicles or obesity. However, specific treatment might involve lifestyle changes or medication.

Key words: Polycystic ovary syndrome (PCO).

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP10

ROLE OF KETONE BODIES IN MANAGEMENT OF CARDIOVASCULAR DISEASES

B.Roselin[1], D.Navya Sai Vijaya[2],B.Manisha[3], K.ChinnaRao[4],P. Sudhakar[5]

[1] *St. Pauls College of Pharmacy, Turkayamjal.*

[2]*Assistant Professor, Department of Pharmacology, St.Pauls College of Pharmacy,Turkayamjal*.

Ketone bodies are 4-carbon molecules that are synthesized through the process known as ketogenesis. Ketone bodies are endogenous metabolites produced by the liver, in particular conditions of prolonged fasting, insulin deprivation & extreme exercise and used peripherally as an energy source when glucose is not readily available. The two main ketone bodies are acetoacetate and 3 beta-Hydroxybutyrate (β-OHB).Ketone bodies are an efficient substrate for cardiac metabolism, as they require less oxygen per molecule of adenosine triphosphate generated. Accumulating evidence suggests that failing heart reprograms fuel metabolism towards increased utilization of ketone bodies and that improve endothelial function, ameliorate oxidative stress, improve mitochondrial function and mitigate cardiac remodelling. Other systemic extracardiac effects on body weight, blood pressure, and glycaemia and lipid profile may also benefit patients with cardiovascular diseases. Ketone bodies may also exert a myriad of pleiotropic effects. expected role of ketones as an efficient substrate for (cardiac) metabolism, as they require less oxygen per molecule of ATP generated, ancillary cardio protective effects of ketone bodies beyond energetics have also recently been identified. Despite an increase in the number of studies focused on cardiac ketone body metabolism in pathological hypertrophy and heart failure, there seems to be a paucity of research elucidating the role of ketone body metabolism in oversight of cardiovascular disorders.

Key words:Cardiovascular disease, Pleiotropic effects, Heart Failure, ketones, Hydroxybutyrate.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP11

BENZODIAZEPINE WITHDRAWAL SYNDROME

L. Sai Geethika, Sudhakar sir

[1] *St. Pauls College of Pharmacy, Turkayamjal.*

[2]*Assistant Professor, Department of Pharmacology, St.Pauls College of Pharmacy,Turkayamjal*.

Many doctors are hesitant to prescribe Benzodiazepines for long-term use because of their addictive nature and intense withdrawal symptoms also called Benzodiazepine withdrawal syndrome. People using this class of drugs can build up tolerance, hence need higher doses to feel the effects of the drug, they are medically or recreationally develop a physical dependence on them. The withdrawal symptoms are physically and emotionally painful and can even be life threatening. They may vary in severity and frequency throughout all phases of the withdrawal process. These symptoms typically last up to ten days and include sleep disturbances, Anxiety, panic attacks, seizures, psychosis, cognitive decline. Any patient who has taken a benzodiazepine for longer than 3–4 weeks is likely to have withdrawal symptoms if the drug is ceased abruptly. There are two approaches to the management of dependence, benzodiazepine withdrawal with the aim of abstinence and benzodiazepine maintenance therapy.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP12

WEREWOLF SYNDROME – HYPERTRICHOSIS

Nakkala Gnapika*[1], Dr. Sadia Naseem[2]

[1]*Department of Pharmacy Practice, St Paul's College of Pharmacy,Turkayamjal,Hyderabad*

[2]*Assistant Professor Department of Pharmacy Practice, St Paul's College of Pharmacy,Turkayamjal,Hyderabad.*

Hypertrichosis Is A Rare Disorder That Causes Abnormal Excessive Body Hair Growth. Hypertrichosis Has Informally Been Called Werewolf Syndrome Because The Appearance Is Similar To That Of A Werewolf. It Is Often Associated With Additional Anomalies Including Gingival Hyperplasia, Deafness, Cardiomegaly And Bone Abnormalities. The Association Of Gingival Fibromatosis And A Coarse Facies Could Further Worsen The Esthetics. Thus, A Multidisciplinary Approach Involving A Psychologist, A Dentist As Well As A Dermatologist Would Be Mandatory. We Present This Rare Syndrome Describing A Case Of A 9-Year-Old Boy With Congenital Hypertrichosis And Gingival Fibromatosis. The Growth Being Normal, The Features Of This Boy Were Similar To Hypertrichosis. Hypertrichosis Has Informally Been Called Werewolf Syndrome Because The Appearance Is Similar To The Werewolf.

Key words: Fibromatosis, Hypertrichosis, Werewolf Syndrome.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP13

OBESITY WORLD WIDE

Aastha Thakur*, Leena Mohammed*,B. Suhasini

[1]*Department of Pharmacy Practice, St Paul's College of Pharmacy,Turkayamjal,Hyderabad*
[2]*Assistant Professor Department of Pharmacy Practice, St Paul's College of Pharmacy,Turkayamjal,Hyderabad.*

Childhood obesity is a serious problem in the United States, putting children and adolescents at risk for poor health. Obesity prevalence among children and adolescences is still too high. The prevalence of obesity was 19.7% and affected about 14.7 million children and adolescences. Obesity prevalence was 12.7% among 2 to 5 years old, 20.7% among 6 to 11 years old, and 22.2% among 12- to 19-year-olds. Childhood obesity is an issue of serious medical and social concern. In developing countries including India it is a phenomenon seen in higher socio-economic strata due to adoption of a western lifestyle. Consumption of high calorie food lack of physical activity and increased screen time are major risk factors for childhood obesity apart from other genetic parental factors and socio culture practices.

Key words: Obesity, Childhood obesity, Obesity prevalence.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP14

ANGIOTENSIN RECEPTOR NEPRILYSIN INHIBITION IN HEART FAILURE

K.Sharath [*1], Mrs. P. Salome Satya Vani[2]

[*1] *Pharm.D. Intern,*

[1] *Assistant professor, Sri Venkateshwara College of pharmacy, Madhapur-86, Hi-tech city road, Telangana-81, India*

The leading factor in cardiovascular mortality worldwide is heart failure (HF). Over the years, the prevalence of HF has progressively risen, particularly in older populations. The key to understanding and treating heart failure is the inhibition of neurohumoral pathways, such as the renin-angiotensin-aldosterone and sympathetic nervous systems (HF). A new family of drugs known angiotensin receptor neprilysin inhibitors (ARNI) has recently demonstrated positive therapeutic effects on patients with cardiovascular disease (CVD) in multiple clinical studies, lowering the morbidity and mortality of CVD patients. Endopeptidase Neprilysin cleaves a range of peptides including natriuretic peptides, bradykinin, adrenomedullin, substance P, angiotensin I and II, and endothelin. It plays a significant part in endocrine, cardiovascular, renal, pulmonary, gastrointestinal, and neurologic activities. The combination angiotensin receptor and neprilysin inhibitor (ARNi) was designed to promote vasodilatory natriuretic peptides while preventing angiotensin system counter regulatory activation. Sacubitril / valsartan may be useful clinically not only for secondary prevention but also for primary prevention of heart failure in uncontrolled elderly hypertensive patients. It may be effective at suppressing the age-related continuum from hypertension to heart failure.

Key words:Heart failure, ACEI, Neprilysin, ARNI.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP15

NESTORONE AND TESTOSTERONE GEL- HORMONAL BIRTH CONTROL FOR MEN

Aastha Singh*, K. Lakshmi Bhavana*& Dr.S.Hemalatha

[1]*Sarojini Naidu Vanita Pharmacy Maha Vidyalaya, Tarnaka, Secunderabad-17, Telangana*

Nestorone/Testosterone gel is the first birth control product designed for males that has progressed past the initial steps. It is currently in Phase IIb to evaluate safety and contraceptive efficacy, and investigators are hopeful their findings will support a Phase III study.NEST was developed in a collaboration between the Population council and NICHD's Contraceptive Development Program, which is part of the institute's Intramural Research Program. It is a clear gel that a man applies daily by rubbing a small dollop into the skin on each shoulder blade. The gel is hormone-based, tackling two important (but linked) goals—inhibiting sperm production and maintaining sexual drive and function. To counter the Nestorone activity in blood the gel contains synthetic testosterone to maintain libido and other testosterone dependent activity. It is also reversible; sperm levels return to normal about 4 months after a man stops using the product. The ongoing trials consists of a screening phase lasting 4 to 8 weeks, a suppression phase estimated up to 20 weeks, a 52-week maintenance/efficacy phase, and a 24-week (estimated) recovery phase. The study will involve approximately 420 couples recruited throughout the CCTN that meet eligibility criteria. The results are estimated to come by the September of 2023.

Keywords:*Testosterone, Safety, Contraceptive, Male, Reversible.*

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP16

ARTIFICIAL INTELLIGENCE IN CLINICAL PHARMACYPRACTICE:THE FUTURE IS NOW

Madhuri.Eega*[1]

[1]*Sri Venkateswara College of Pharmacy affiliated with Osmania University*

In clinical pharmacy setting, artificial intelligence (AI) has shown to reduce the errors encountered in disease diagnosis, to predict the treatment outcomes, to reduce the treatment cost and time. Machine learning algorithms are enhancing the clinical decision-making processes through statistical analysis of data that are difficult for human beings to interpret on their own.AI is also being used to develop personalized drug treatments based on individual test results, reactions to past drugs and historical patient data for drug reactions. It involves documentation of patient care activities in real time.AI can strongly influence and shift pharmacist's focus from dispensing of medicines to a broader range of patient care services. It provides guidance on how and where to obtain the most cost-effective healthcare and how best to communicate with healthcare professionals.Inventory is one of the vital components of current assets. When compared to the traditional techniques of managing inventory use, AI can provide an effective and efficient use of pharmaceutical products.Artificial intelligence could provide new tools for understanding drug-drug interactions and predicts alternative drugs for intended clinical use thus avoiding adverse events.Also artificial intelligence is being significantly utilized within clinical trials to identify patients who fit the trial and to determine the ideal sample size for trials.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP17

PCOS-POLYCYSTIC OVARY SYNDROME INFORMATION

G. Aakanksha[1], K.Akhila[2], K.Mahitha[3] , Ms. SenigarapuSoumya*

[1] *St. Paul's college of pharmacy, Turkayamjal, Nagarjuna Sagar road, 501510.*

[2] *Assistant professor, Department of pharmaceutics, St. Paul's college of pharmacy, Turkayamjal, Nagarjuna Sagar road, 501510.*

The polycystic ovary syndrome is the state in which a follicle is not sufficiently matured for ovulation to occur and an ovary is filled with numerous small immature ova. Recent studies have reported that 6% of women of reproductive age suffer from polycystic ovary syndrome (PCOS). The balance between Follicle stimulating hormone and Luteinizing hormone in gonadotropic hormones which are secreted from the pituitary gland required to induce ovulation, is not properly maintained. PCOS results in irregular menstruation, loss of menstrual periods, menorrhagia, an increase of male hormones (testosterone), obesity and other problems.It is treated by taking medication like combination of estrogen and progestin hormones, synthetic progestin,metformin, clomiphene, androgen lowering spironolactone etc.

Key words: Menorrhagia, Metformin, Clomiphene.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP18

REALITY CHECK OF MENSTRUATION IN RURAL AREAS

Rajulasupraja*[1]Goduguusharani,Punemtejasri,suhasini

[1] *St. Paul's college of pharmacy, Turkayamjal, Nagarjuna Sagar road, 501510.*

[2] *Assistant professor, Department of pharmaceutics, St. Paul's college of pharmacy, Turkayamjal, Nagarjuna Sagar road, 501510.*

Sanitization and hygiene is very important for women's during menstruation and can be matter of life and death .lack of proper sanitation during the menstrual cycle can develop ever illness .in India women and girls in rural areas are still not aware and about don't know about menstrual hygiene and end up suffering .millions of women's and girls'worldwide experiencing period poverty .the ministry of health and family (MHF) Indian welfare has introduced a scheme for promotion of menstrual hygiene among the girls and women in rural areas. Scotland is the first country to offer period products free of charge on national scale achieving the menstrual health is fundamental to the equality ,rights and dignity of all individual who menstruate.

Keywords: Menstrual hygiene.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP19

EMERGING TREATMENTS FOR RETINITIS PIGMENTOSA

Lavanya Duddu[*1], Mr. Sareesh Kankanala

[1] *St. Paul's college of pharmacy, Turkayamjal, Nagarjuna Sagar road, 501510.*

[2] *Assistant professor, Department of pharmaceutics, St. Paul's college of pharmacy, Turkayamjal, Nagarjuna Sagar road, 501510.*

Retinitis Pigmentosa (RP) is a class of rare-inherited retinal dystrophies which can lead to blindness and is characterized by pigment deposits predominantly present in the periphery of the retina. The hereditary pattern of RP follows a Mendelian inheritance pattern. The onset of RP typically occurs during the early teenage years with difficulties in dark adaptation, concurrent nyctalopia and reduced visual field (VF) which leads to tunnel vision and gradual reduction in central vision with a risk of blindness. Currently, no standard treatment for RP is available. One medicinal product (MP), Luxturna, which consists of voretigene neparvovec, a gene transfer vector, is authorized in the European Union (EU) and United States (US) to treat patients with inherited retinal dystrophies, caused by biallelic RPE65 mutations, and who have sufficient viable retinal cells.

Keywords: *Retinitis Pigmentosa (RP), visual field, Luxturna.*

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP20

SJOGREN'S SYNDROME

Reddy.Sathvika*[1]K.Nikitha, T.PrasannaDr.M.Anusha,

[1] *St. Paul's college of pharmacy, Turkayamjal, Nagarjuna Sagar road, 501510.*

[2] *Assistant professor, Department of pharmaceutics, St. Paul's college of pharmacy, Turkayamjal, Nagarjuna Sagar road, 501510.*

Sjogren's syndrome is a chronic inflammatory autoimmune disorder characterized by inflammatory destruction of the lacrimal and salivary glands. It is the 3rd most common autoimmune disease. The Cause of this syndrome is idiopathic and also due to some infections. The clinical features include glandular and extra glandular symptoms such as pain in joints or muscles, abnormality of taste or loss of taste, hoarseness or impaired voice, difficulty in swallowing or dryness, dry cough, dry eyes etc. The diagnosis of this syndrome is done by Blood test, Urinary analysis, Biopsy, Eye examination. Treatment includes Steroids,Saliva production stimulator, NSIADs, DMARDS.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP21

CYBERCHONDRIA - A NEW TRANSDIAGNOSTIC DIGITAL COMPULSIVE SYNDROME.

BuggaKeerthana*[1]GatlaVaishnavi ,Hasibur Amin , KanukuntlaKeerthi. Mrs P Naga Haritha

[1] *St. Paul's college of pharmacy, Turkayamjal, Nagarjuna Sagar road, 501510.*

[2] *Assistant professor, Department of pharmaceutics, St. Paul's college of pharmacy, Turkayamjal, Nagarjuna Sagar road, 501510.*

Cyberchondria is a disorder in which a person searches excessively for health care information online, but rather than finding relief for their concerns, they diagnose themselves with a terrible disease & feel more anxious. Cyberchondria is a term given to someone who develops extreme unwanted anxiety by using the internet to search for medical information.

Keywords: Cyberchondria, e-Diagnosis,Self-Diagnosis.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP22

A WORLD FREE FROM T1 DIABETES

M. Aarthi Joshi, P*[1]. Madhukiran, V. Srujankumar

[1] *St. Paul's college of pharmacy, Turkayamjal, Nagarjuna Sagar road, 501510.*

Teplizumab is an Immunotherapy drug, which has just been approved by the FDA for use to delay of clinical type 1 diabetes. It helps to protect the insulin producing beta cells from the immune attack that causes type 1 by attaching to markers on a type of immune cell. Teplizumab has been shown to delay the development of type 1 in at-risk individuals by an average of 3 years. Teplizumab was developed at the University of Chicago in partnership with Ortho pharmaceuticals, at further developed at Marcogenics Inc. including a collaboration with Eli lilly to conduct the first phase 3 clinical trials in early-onset type 1 diabetes Type 1 diabetes is an autoimmune disease for which there are currently no approved disease modifying therapies. Teplizumab is the first disease modifying therapy available to delay clinical type 1 in individuals at high risk anywhere in the world Teplizumab was found to be associated with some side effects such as lymphopenia, skin and subcutaneous tissue disorders. And had a temporary lower level of White Blood Cells than they should have. Crucially, the patients White Blood Cells count soon returned to normal.

Key words: *Teplizumab, Immunotherapy drug, type 1 diabetes, side effects.*

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP23

BARCODE MEDICATION ADMINISTRATION

R. Bhavya*[1], Fatima sarwar, P.Shivani, P. Jagruthi.

[1] *St. Paul's college of pharmacy, Turkayamjal, Nagarjuna Sagar road, 501510.*

[2] *Assistant professor, Department of pharmaceutics, St. Paul's college of pharmacy, Turkayamjal, Nagarjuna Sagar road, 501510.*

Barcode medication administration is an inventory control system that is used in hospitals to prevent errors in medication distribution. The medication barcode ensures to avoid human errors and administer accurate medication to a patient at the right time. All the drugs present in the pharmacies are labelled with unique barcodes generated by the BCMA system. The medicinal barcodes are a great tools to verify drug information before it is given to a patient and to avoid any mistake in the dosage. The pharmacy scans the barcode to obtain the prescription from the patient's medicinal record to know the strength, dosage, type of the drug before sending it to patients ward. Also the pharmacy barcode system triggers alerts to pharmacy staff about any dispensing errors, if any and to monitor and control it. The action is effectively taken before the medicine reaches the patient and any adverse effects can takes place. Barcodes are needed in medication administration so that they could help in reducing medical errors which specifically occur at the point of administration. Scanning of medication barcode is done to improve accuracy and enable product identification. The process provides reduced errors by limited involvement of data entry by staff and access to staff for most current data of patients and their medication. Barcodemedicine administration plays a significant role in hospital pharmacy in monitoring patient and help in earlier recovery of patient.

Key words: Barcode; Barcode medication.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP24

THE IMPACT OF EMPHYSEMA IN PULMONARY FIBROSIS

Rakesh.A*[1]

St. Paul's college of pharmacy, Turkayamjal, Nagarjuna Sagar road, 501510.

Several groups have described a syndrome in which idiopathic pulmonary fibrosis (IPF) coexists with pulmonary emphysema. This comes as no surprise since both diseases are associated with a history of exposure to cigarette smoke. The syndrome of combined pulmonary fibrosis and emphysema (CPFE) is characterized by upper lobe emphysema and lower lobe fibrosis. Physiological testing of these patients reveals preserved lung volume indices contrasted by markedly impaired diffusion capacity. The incidence of CPFE remains unknown but several case series suggest that this subgroup may comprise up to 35% of patients with IPF. CPFE is a strong determinant of associated pulmonary hypertension (PH). In addition, CPFE has major effects on measures of physiological function, exercise capacity and prognosis, and may affect the results of pulmonary fibrosis trials. Further studies are needed to ascertain the etiology, morbidity, mortality and management of the CPFE syndrome, with or without PH, and to evaluate novel therapeutic options in CPFE.

Key words: Combined pulmonary fibrosis and emphysema; emphysema; idiopathic pulmonary fibrosis; pulmonary hypertension.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP25

EFFECTS AND DIAGNOSIS OF HANTAVIRUS

D.Keerthi*,K.Dhanashree*and Dr.S.Hemalatha

[1]*Department of Pharmacy Practices.N.VANITHA PHARMACY MAHA VIDYALAYA, TARANAKA, SECUNDERABAD-17, TELANGANA*

Hantavirus is an emerging zoonotic disease transmitted by rodents such as mice and rats .During Korean world war 1950's it was identified by two Swedishphysicians' myhrman and zetterholm.Hantavirus was classified has two ways they are Hemerlogic fever and pulmonary syndrome .It is caused by inaling contaminated air by rodents urine and dropping. Approximately 40 variant have been identified in America. The incubation periodof this virus various from few days to 6 days after exposure.Although NOT all the countries have reported many human case.This virus have been underestimated due to its resemblance to other febrile illness. Those cases mainly reported in South America. It mainly effecting the gastrointestinal infections which includes vomiting,nausea,diarrhea,abdominal pain ,also it causes fever,headache,chills,dizziness,myalgia,and observed ,onset of respiratorydistress ,hypertension.Clinical management should focus on the patient haemodynamics monitoring,fluidmanagement, and also ventilation support. Sever cases should be immediately transferred to intensive care units (ICUS).Fatality rates may significantly decrease through early recognition and decentralization of laboratories allowing for early detection and better case management. There is no vaccine for this virus only measures have to be taken. Hygienic practices prevent rodent infestation. Bystoringfood, water and garbage in containers with tightly fitted lids. Have mousetraps near our surroundings. Wear rubber or plastic gloves while cleaning our surrounding.

Key words:Hemerologic Fever, Pulmonary syndrome, Rodents,Hypertension,Gastrointestinal Infection.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP26

SIGNIFICANCE AND CHALLENGES IN MEDICATION THERAPY MANAGEMENT (MTM.)

Ayesha Begum*

St Pauls college of pharmacy, Turkayamjal, Hyderabad-501510

Medication Therapy Management (MTM) is the service given by pharmacist and other healthcare professionals by reviewing an individual patient's medications to make sure the person is on the right drug, at the right dose, at the right time. The service is to be provided in a systematic manner by considering drugs prescribed and disease of the patient with respect to overall health and lifestyle factors. To acknowledge the importance and challenges of Medication Therapy Management (MTM) in order to make sure that the medication is right for the patient's health conditions and that the best possible outcomes from the medication therapy can be achieved. Systematic review of various articles and publications relatedto Medication Therapy Management was done. Medication Therapy Management (MTM) has a cardinal role in optimizing the therapeutic outcomes of the drugs given in addition to prevent misuse of drugs and cost related adverse effects. Regardless of various benefits of MTM there are provisional barriers to be faced by the pharmacists and other healthcare providers. Pharmacists consider providing MTM service professionally gratifying as they have adequate knowledge as well as access to information required for the service.

Key words: Medication Therapy Management (MTM), Systematic review, Health and lifestyle factors, Therapeutic outcomes, Provisional barriers.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP27

BRAIN TONICS FOR STRESS MANAGEMENT AND MENTAL HEALTH IN YOUNG ADULTS

G.Shilpa*[1]D.Sangeetha,Jyothi madam

[1] *St. Paul's college of pharmacy, Turkayamjal, Nagarjuna Sagar road, 501510.*

[2] *Assistant professor, Department of pharmaceutics, St. Paul's college of pharmacy, Turkayamjal, Nagarjuna Sagar road, 501510.*

For a multitude of reasons, life has grown challenging and stressful for young people in today's society. Adults lead more demanding and stressful lives than kids. This is due to the increased competition in today's society. Childhood personal and emotional issues can eventually cause problems in life and despair. Due to their busy lives, young people are suffering from stress and mental health problems. Brain tonics, physical activity, etc., are used to address these difficulties. Brain tonics are necessary in order to maintain and safeguard each person's memory and overall state of brain health. The effectiveness of brain tonics on mental health.

Key words: Brain, Brrain tonic, Stress management.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP28

ZOMBIE VIRUS: THE VIRUS OF DEAD

V.Aakanksha*, Mrs. P Roja

[1] *St. Paul's college of pharmacy, Turkayamjal, Nagarjuna Sagar road, 501510.*

[2] *Assistant professor, Department of pharmaceuticology, St. Paul's college of pharmacy, Turkayamjal, Nagarjuna Sagar road, 501510.*

Zombie virus is the name given to a virus that is frozen in ice and therefore dormant. The virus emerged due to the thawing of permafrost as the global temperature is rising the purpose of study is to know about the virus. Does the virus infect humans? What are the effects of virus in the infected organisms? The European researchers have raised concern of another pandemic after resurrecting a 48,500 years old zombie virus from frozen lakes of Russia. To know the causes and the threats of the virus to mankind.to know how was the virus originated.

Key words: zombie virus, dormant, permafrost, frozen, russi.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP29

JEEVAN BINDI AS LIFE SAVEING DOT IN IODINE DEFICIENCY

Khan sohai*[1], Dr. Murunalshirsat

[1]*Department of Pharmacy Practice, S.B.S.P.M's College of Pharmacy*

The wearing of bindi form part of a cultural practice of IndianWomen, which are self-adhesive in between their eyebrows, havebeen impregnated with a solution of iodine. Production costs are minimal. Wearing the iodine-infused bindi requires no behavioralchange. Thebindi has been symbolizing a chakra, or the point ofenergy, among other six, situated in the body.

Key words: Life saving, Iodine, Iodine deficiency.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP30

P4 MEDICINE AN EMERGING PARADIGM FOR IMPROVED DIAGNOSIS AND SAFE THERAPY IN PEDIATRIC ONCOLOGY

Masne Deep*[1], Khan Sohail

[1]*Department of Pharmacy Practice, S.B.S.P.M's College of Pharmacy*

Cancer is a lethal disease that kills a great number of people each year. Standard treatments such aschemotherapy or radiation are only effective in a small percentage of individuals due to illness variability.Tumors can be caused by a variety of genetic factors and express a variety of proteins depending on theindividual. Because of developments in high-throughput technology, there has been a flood of large-scalebiological data produced in recent decades. As a result, the focus of medical research has evolved. It was aonce-in-a-lifetime chance for translational research to explore molecular alterations across the entiregenome. In this setting, precision medicine was developed, and the possibility of better diagnostic andtreatment tools became a reality. This is especially true in the case of cancer, which is becoming moreprevalent around the world. The goal of this study is to look at precision medicine technology and itsapplications to cancer, with a focus on children. The inherent diversity of cancer lends itself to the rapidlyexpanding field of precision and personalized medicine.

Key words: Diagnosis, Oncology, Pediaric oncology.

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 1, 2023

SPCP/PPP32

PHARMACOVIGILANCE: INDUSTRIAL PERSPECTIVE

Mohammed Mujtaba*[1], Chilukamarry Sai Venkata Ganesh[1], Dr. G.Anantha Lakshmi[2], Dr. Afifa Khan[3]

[1]*Department of Pharmacy Practice, Sri Venkateshwara College of Pharmacy, Madhpur Hyderabad*

[2]*Associate Professor Department of Pharmacy Practice, Sri Venkateshwara College of Pharmacy, Madhpur Hyderabad.*

One of the most important steps in the drug development process is pharmacovigilance (PV), which makes sure that biological products have the appropriate safety profile before applying for regulatory approval.One problem that is particularly prevalent in clinical practise is inconsistent reporting of adverse events. Adverse reactions might occur hours after taking a medication, making it difficult for individuals to recognise them when they happen and fail to properly report them to a healthcare provider. This is crucial information for the drug manufacturer since it might point to a problem with the medication's safety, particularly if a specific adverse event (AE) is reported frequently to WHO.The AI technology is used in each step of the drug designing procedure, which decreases the health hazards related to preclinical trials and also reduces the cost substantially. The AI is an effective tool for data mining of pharmaceutical data. Artificial intelligence (AI)-technologies have the potential to completely alter how we manage pharmaceutical data.AI has a potential to increase medication safety through both the monitoring of adverse events and the prediction of the safety profiles of new Pharmaceutical agents. Implementation of AI in pharmacovigilance might be challenging, one might also rethink and modernise the discipline. It is no longer necessary to provide fragmented datasets or confirm to standards from the 20th century for individual safety reports.

Key words: Pharmacovigilance, biological products, AI.