Books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during year 2020

Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN number of the proceeding	Page No
1.	Dr. M.Saritha		Formulation and evaluation of metoprolol succinate gastroretentive tablets using HPMC and peanut husk	Multi-Disciplinary Research and Innovation	Virtual International Award Conference on Multi-Disciplinary Research and Innovation	International	2021	978-93-91535-07-0	18
2.	Dr. P.V. Kamala Kumari		Isolation of Aflatoxigenic fungi in red chilli samples using direct cultural method	Multi-Disciplinary Research and Innovation	Virtual International Award Conference on Multi-Disciplinary Research and	International	2021	978-93-91535-07-0	19

					Innovation				
3.	B.H.Satya Kiran		Applications of stability indicating UV spectrophoto metric method for the estimation of caffeine in gel formation, coffee beans, plasma and urine	Multi-Disciplinary Research and Innovation	Virtual International Award Conference on Multi-Disciplinary Research and Innovation	International	2021	978-93-91535-07-0	20
4.	Mr. K.Varaprasada Rao		Development and validation of new spectrophoto metric method for estimation of ascorbic acid in star fruit, acacia, urine and cream formulation.	Multi-Disciplinary Research and Innovation	Virtual International Award Conference on Multi-Disciplinary Research and Innovation	International	2021	978-93-91535-07-0	21

5.	Dr. P.BalaKrishnaiah		Formulation and evaluation of herbal skin whitening cream	Multi-Disciplinary Research and Innovation	Virtual International Award Conference on Multi-Disciplinary Research and Innovation	International	2021	978-93-91535-07-0	22
6.	Dr. K.Gana Manjusha		Formulation and evaluation of a novel, effective herbal bath soap	Multi-Disciplinary Research and Innovation	Virtual International Award Conference on Multi-Disciplinary Research and Innovation	International	2021	978-93-91535-07-0	23
7.	Mr P.Srinu		Evaluation of Hepatoprotective activity of polyherbal mixtures on ethanol induced hepatotoxic rats	Multi-Disciplinary Research and Innovation	Virtual International Award Conference on Multi-Disciplinary Research and Innovation	International	2021	978-93-91535-07-0	24
8.	Mr. KRVS Chaitanya		Cardioprotective Activity of polyherbal formulation against Doxorubicin induced	Multi-Disciplinary Research and Innovation	Virtual International Award Conference on Multi-Disciplinary Research and	International	2021	978-93-91535-07-0	25

			cardiotoxicity in rats		Innovation				
9.	Dr.S.Satya Lakshmi		Direct and Indirect approaches for Rapid Screening of Covid-19 patients	Recent Advances in Applied Sciences, Technology and Health	Recent Advances in Applied Sciences, Technology and Health	International	2021		29
10.	Mrs. V.Jhansi Lakshmi		Evaluation of antioxidant and anti-hyper lipidemic activity of polyherbal formulation in Albino Wistar rats	Current Research Trends in Engineering, Science & Management	Current Research Trends in Engineering, Science & Management	International	2021	978-81-948668-4-8	33
11.	Mrs A. Swathi Annapurna		Enhancement of Solubility of Rosuvastatin by Liquisoild technique	Current Research Trends in Engineering, Science & Management	International Conference on Current Research Trends in Engineering, Science & Management	International	2021	978-81-948668-4-8	34

12.	Dr. D. Vasudha		Development and validation of UV Spectrophotometric method for the estimation of Favipirvir in bulk and pharmaceutical formulation	Current Research Trends in Engineering, Science & Management	International Conference on Current Research Trends in Engineering, Science & Management	International	2021	978-81-948668-4-8	35
13.	Dr. G.Vasantha		Preliminary phytochemical screening and antihelminthic activity of Crossandra infudibuliformis root extract	Current Research Trends in Engineering, Science & Management	International Conference on Current Research Trends in Engineering, Science & Management	International	2021	978-81-948668-4-8	36
14.	Dr. K.Daniel Raju		in vivo antioxidant activity of Muntingia calabura leaves extracts in albino rats	Current Research Trends in Engineering, Science & Management	International Conference on Current Research Trends in Engineering, Science & Management	International	2021	978-81-948668-4-8	37

15.	Dr.Gana Manjusha Kondepudi		Evaluation of physicochemical and binding properties of Lannea coromandelica Merr Gum in Tablet Formulation	Current Research Trends in Engineering, Science & Management	International Conference on Current Research Trends in Engineering, Science & Management	International	2021	978-81-948668-4-8	38
16.	Mr KRVSChaitanya		Evaluation of methanolic extracts of Acorus calamus on plasma lipid levels in Triton-X-100 induced hyperlipidemia Wistar Rat's model	Current Research Trends in Engineering, Science & Management	International Conference on Current Research Trends in Engineering, Science & Management	International	2021	978-81-948668-4-8	39
17.	Mr. K.Vara Prasada rao		Development and validation of novel spectrophotometric methods for the determination of cefixime Trihydrate in bulk and	Current Research Trends in Engineering, Science & Management	International Conference on Current Research Trends in Engineering, Science & Management	International	2021	978-81-948668-4-8	40

			pharmaceutical formulation						
	Dr. M.Sairitha		Formulation and evlaution of Irbesartan orodispersible tablets using natural super disintegrating agent.	Current Research Trends in Engineering, Science & Management	International Conference on Current Research Trends in Engineering, Science & Management	International	2021	978-81-948668-4-8	41
18.	Ms. N.Madhuri		Effect of Herbal colouring agents in the preparation of Lipsticks	Current Research Trends in Engineering, Science & Management	International Conference on Current Research Trends in Engineering, Science & Management	International	2021	978-81-948668-4-8	42
19.	Dr. P.Balakrishnaiah		Preparation and evaluation of herbal balm for stress management	Current Research Trends in Engineering, Science & Management	International Conference on Current Research Trends in Engineering, Science & Management	International	2021	978-81-948668-4-8	43

20.	Mr. P.Srinu		Diuretic activity of aqueous extract of Nigella sativa in albino rats	Current Research Trends in Engineering, Science & Management	International Conference on Current Research Trends in Engineering, Science & Management	International	2021	978-81-948668-4-8	44
21.	Dr. G. Vasantha		In vitro anti-oxidant and nootropic activity of Nyctanthes arbortrists root suspension against scopolamine induced amnesia in rats	IBCB-2021	International Conference on Innovations in Big Data, Cyber Security and Bioinformatics &Biotechnology	International	2021	9789-38303-83-8-1	46
22.	Mrs. K.Gana Manjusha		Invitro Evaluation of blood coagulation activity of Mimusops Elengi Fruits and Development of Hemostatic Wound	IBCB-2021	International Conference on Innovations in Big Data, Cyber Security and Bioinformatics &Biotechnology	International	2021	9789-38303-83-8-1	47

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23.	Mr. P.Bala Krishnaiah		In vitro anti-inflammatory activity of Mimusops elengi fruits	IBCB-2021	International Conference on Innovations in Big Data, Cyber Security and Bioinformatics &Biotechnology	International	2021	9789-38303-83-8-1	48
24.	Dr. K.Purna Naga Sree		Pyroglutamic acid derivatives synthesis, characterization and in vitro anti- microbial activity	IBCB-2021	International Conference on Innovations in Big Data, Cyber Security and Bioinformatics &Biotechnology	International	2021	9789-38303-83-8-1	49
25.	Mr.K.R.V.S.Chaitanya		Effect of Cucumis melo seeds extract on wound healing activity in albino wistar rats	IBCB-2021	International Conference on Innovations in Big Data, Cyber Security and Bioinformatics &Biotechnology	International	2021	9789-38303-83-8-1	50

26.	Dr.D.Vasudha		Synthesis, Characterization and anti-microbial evaluation of Isoxazoles	IBCB-2021	International Conference on Innovations in Big Data, Cyber Security and Bioinformatics &Biotechnology	International	2021	9789-38303-83-8-1	51
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28.	Mr. K.Varaprasada Rao		Development and Validation of New Spectrophotometric Method for the Determination of Celecoxib in Pharmaceutical Dosage Form	IBCB-2021	International Conference on Innovations in Big Data, Cyber Security and Bioinformatics &Biotechnology	International	2021	9789-38303-83-8-1	53

29.	Dr. M.Trinadh Rao		Formulation and evaluation of oral dispersible tablets of amlodipine	IBCB-2021	International Conference on Innovations in Big Data, Cyber Security and Bioinformatics &Biotechnology	International	2021	9789-38303-83-8-1	54
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32.	Mr. B.Satya Kiran		Development and Validation of stability indicating Visible Spectrophoto metric method for estimation of Furazolidone in pharmaceutic al formulation and urine.	IBCB-2021	International Conference on Innovations in Big Data, Cyber Security and Bioinformatics &Biotechnolo gy	International	2021	9789-38303-83-8-1	57
33.	Dr. S. Satyalakshmi		Determination of Biological Activities of Marine Algae Collected From Yarada and Tenneti Park Beach	IBCB-2021	International Conference on Innovations in Big Data, Cyber Security and Bioinformatics &Biotechnolo gy	International	2021	9789-38303-83-8-1	58
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35.	Mrs. V.Jhansi Lakshmi		Effect of selected herbal formulations on haloperidol induced catalepsy in albino mice and evaluation of in vitro anti-oxidant activity	IBCB-2021	International Conference on Innovations in Big Data, Cyber Security and Bioinformatics &Biotechnology	International	2021	9789-38303-83-8-1	60
36.	Dr.P.Chiranjeevi		Synthesis, characterization and anti microbial activity of some new isoxazoles	IBCB-2021	International Conference on Innovations in Big Data, Cyber Security and Bioinformatics &Biotechnology	International	2021	9789-38303-83-8-1	61
37.	Dr.P.V.Kamala Kumari		In vitro bioequivalence studies of six brands of Sustained release Metformin HCl Tablets	IBCB-2021	International Conference on Innovations in Big Data, Cyber Security and Bioinformatics &Biotechnology	International	2021	9789-38303-83-8-1	62

38.	Dr. M.Saritha		A comparative study of capsules and oro dispersible tablets of Lansoprazole: An established proton pump inhibitors	IBCB-2021	International Conference on Innovations in Big Data, Cyber Security and Bioinformatics &Biotechnology	International	2021	9789-38303-83-8-1	63

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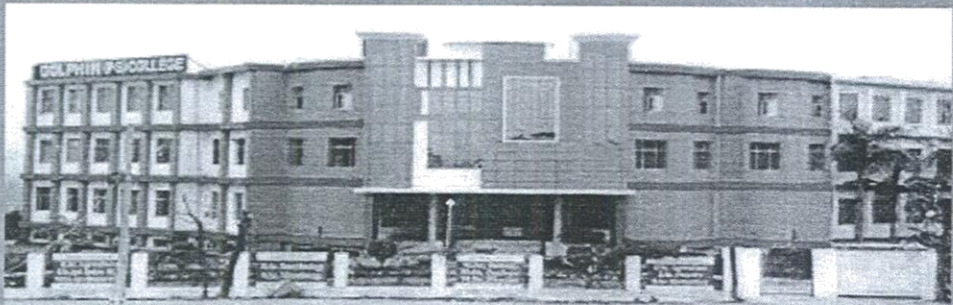

Dolphin (PG) College of Science & Agriculture, Chunni Kalan, Punjab, India

ISBN: 978-93-91535-07-0

978-93-91535-07-0

Published by:
A.R. Research Publication

MDRI-2021

Conference World

www.conferenceworld.in

Virtual International Award Conference on Multi- Disciplinary Research and Innovation

18th August 2021

Dolphin (PG) College of Science & Agriculture,
Chunni Kalan, Punjab, India

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Formulation And Evaluation of Metoprolol Succinate Gastroretentive Tablets using HPMC and Peanut Husk

M. Saritha*, Siyyadri Hemalatha, Kadagala Sridevi, Nemala Chandini, Satyaprakash Panda
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Metoprolol succinate is a potent antihypertensive drug belonging to class 1 BCS classification. Conventional oral formulations should be administered multiple times a day which is found to have many draw backs like adverse side effects, poor patient compliance and high cost. Sustained once daily formulation can overcome these drawbacks. Floating tablets of Metoprolol Succinate were to be prepared using various polymers like peanut husk powder (PHP) and hydroxy propyl methyl cellulose (HPMC k-4) using various concentrations and a combination of both by wet granulation method and the drug release of the formulations is to be compared and the best formulation is to be selected.

Keywords: Metoprolol succinate, Gastroretentive Tablets, HPMC, Peanut Husk

Isolation of Aflatoxigenic Fungi in Red Chilli (*Capsicum Annuum*) Samples using Direct Cultural Method

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The aim of the study was conducted to assay the ability to produce aflatoxins by the *Aspergillus* spp. isolated from red chilli (*Capsicum annuum* L. Solanaceae) available throughout the country. The results found in the experiment are much more behind the acceptable limit according to some international standard. As red chilli is a widely used spice in India for food preparations, contamination of red chilies has both health and economic implications. Thus extensive research need to be done to identify the exact factors responsible for aflatoxin contamination in red chili and proper controlling measures may be taken for controlling the surveillance of aflatoxinic fungi like as use of bio-pesticides, proper drying method and storage conditions. This type of practice may help the chili growers to maintain the required standards quality of their produce and be capable to supply aflatoxin free chili to the processors.

Keywords: Aflatoxins, *Aspergillus* spp., *Capsicum annuum,* Direct Cultural Method.

Applications of Stability Indicating UV Spectrophotometric Method for the Estimation of Caffeine in Gel Formulation, Coffee Beans, Plasma and Urine

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A simple, sensitive and stability indicating UV Spectrophotometric method was developed and validated for estimation of caffeine in a gel formulation, plasma and urine samples using 0.1N HCl as solvent. At absorbance maxima of 265nm, the linearity was found to be in range of 4-20µg/mL with correlation coefficient 0.9988. The method was applied for estimation of caffeine in a gel formulation, plasma and urine samples and the results shows excellent recoveries. The method was validated statistically and by recovery studies for linearity, precision, repeatability, and reproducibility. The caffeine was exposed to thermal, photolytic, hydrolytic and oxidative stress conditions, and the stressed samples were analyzed using the proposed method to demonstrate the specificity of the method. The stated method can be used as stability indicating method with high degree of linearity, accuracy and precision for estimation of caffeine in gel formulation and biological samples.

Keywords: UV Spectrophotometric method, Caffeine, Linearity, Precision.

Development and Validation of New Spectrophotometric Method for Estimation of Ascorbic Acid in Star Fruit, Acacia, Urine and Cream Formulation

K. Vara Prasada Rao*, Dasari Pravallika, G.Devi Prasanna, Inukollu Srikanth L. Ravikiran
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The proposed Visible Spectrophotometric method for the estimation of ascorbic acid in star fruit, acacia, urine sample, and cream formulation was found to be simple, precise, rapid, accurate and involved easy sample preparation. The linearity, reproducibility and recover data confirms no major interference due to excipients in the cream in the assay determination so this method can be used for routine quality control analysis of this drug in pharmaceutical dosage forms.

Keywords: Spectrophotometric method, Ascorbic acid, Star fruit, Acacia, Urine sample, Cream formulation.

Formulation and Evaluation of Herbal Skin Whitening Cream

Bala Krishnaiah P*, B. Nandu R Poornima, Deva Harshitha, G.Usha Rani G. Naveen Kumar

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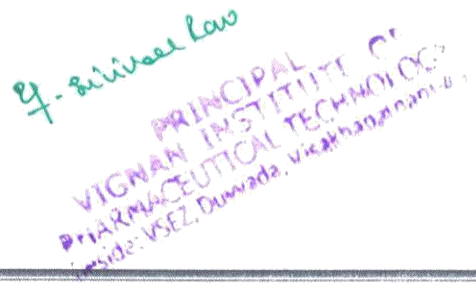
The herbal cream was prepared by using 5 different plant extracts and was formulated and evaluated for safety and minimal side effects.It comprises of general introduction of 5 different herbal extracts like Glycerrhiza glabra (roots), Alpinia galangal(rhizome), Symplocus racemosa(bark), Vateria indica (resins of trunk), Saussurea lappa (roots) & their taxonomical classification and their activities. The present work focuses on the potential of herbal extracts for cosmetic purposes. The uses of cosmetic have been increased in many folds in personal care system. The prepared formulations showed good spread ability, no evidence of phase separation and good consistency during the study period. Stability parameters like visual appearance, nature, viscosity and fragrance of formulations showed that there were no significant variations during the study period. The prepared formulations showed proper Ph range i.e., approximately Ph-7.0, it confirms the compatibility of the formulations with the skin secretions. The extracts which we used were not used in present markets and are having minimal side effects and they have antioxidant activity and protect the skin as a barrier. Hence further testing is needed and preferred.

Keywords: Glycerrhiza glabra (roots), Alpinia galangal(rhizome), Symplocus racemosa(bark), Vateria indica (resins of trunk), Saussurea lappa (roots).



Formulation and Evaluation of a Novel, Effective Herbal Bath Soap

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The ultimate aim of this study is to formulate and evaluate herbal bath soap using methanolic extracts of three plants having ethnic and dermatological importance in ayurveda viz.,*Hemidesmus indicus, Cyperus rotundus a*nd *Saussurea lappa*. The roots of *Hemidesmus indicus, Saussurea lappa* and rhizomes of *Cyperus rotundus.* were extracted with ethanol using soxhelet apparatus. Then these extracts were used to make soap by reacting oil and lye in a process of saponification.The soap made was evaluated for physicochemical characters such as total fatty matter, moisture content, pH etc and found to be 77, 5.3%, 8 and for other parameters good characteristics were observed. The soap also exhibited good cleaning efficiency in removing microbes on hands. Hence, based on the antimicrobial effects and parameters the formulated soap can further be standardized and an alternative to commercial medicinal and skin whitening soaps.

Keywords: *Hemidesmus indicus* (roots), *Cyperus rotundus* (roots), *Cyperus rotundus (*rhizomes) Soxhelet apparatus,Ethanol.

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Evaluation of Hepatoprotective Activity of Polyherbal Mixtures on Ethanol Induced Hepatotoxic Rats

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Chronic alcohol ingestion is known to increase the generation of reactive oxygen species (ROS), thereby leading to liver damage. Antioxidant enzymes act individually or in combination to reduce or counter the effect of these ROS. In the present investigation 3 antioxidant based holly plants leave extracts named *Aegle marmelos*, *Ocimum sanctum,* and *Azardirachata indica* are selected to prepare three doses of polyherbal mixtures of different ration to evaluate its hepatoprotective action. The animals are divided into 6 groups of each 6 animals. Chronic administration of alcohol at (40% v/v, 1ml/100g), for 3 weeks in albino wistar rats can produce hepatotoxicity which will confirmed by the estimation of alanine aminotransferase (ALT), aspartate aminotransferase (AST), alkaline phosphatase (ALP), total bilirubin (TB) and histopathological study at the end of the 3weeks. 100 mg/kg silymarin is used as standard to compare the therapeutic effect. The presence of tannins, saponins and phenolic compounds of polyherbal mixture might be responsible for their heptoprotictive action.

Keywords: Hepatoprotective, Polyherbal mixture, Ethanol

Cardioprotective Activity of Poly Herbal Formulation Against Doxorubicin Induced Cardiotoxcity in Rats

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The present work aimed to examine the efficacy of polyherbal formulations of selected plant extracts to alleviate doxorubicin (DOX) induced acute cardiotoxicity. Albino rats were administered with DOX (25 mg/kg, i.p.) and two doses of polyherbal formulation. Cardiotoxicity was assessed by measuring the levels of various antioxidant parameters in the heart as well as release of marker enzymes in the serum was assayed. Histology of the heart was also performed to check for DOX-induced damages.

Keywords: Cardioprotective Activity, Poly Herbal Formulation, Doxorubicin, Albino rats.

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This is to certify that S Satya Lakshmi of Vignan Institute of Pharmaceutical Technology has presented a poster entitled "Direct and Indirect Approaches for Rapid Screening of Covid-19 Patients" under the theme **"Health Sciences"** in the International Conference on **"Recent Advances in Applied Sciences, Technology & Health (RASTH 2021)"** held between 3 – 5 th March 2021 (Virtual) at SRM IST, Kattankulathur.

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Direct and Indirect Approaches for Rapid Screening of Covid-19 Patients

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Currently, more than 2 lakh people died because of Covid -19, and more than 80 lakh people recovered from the symptoms of this infection as per the World Health Organization (WHO) reports. Nearly more than 219 countries and territories are suffering from the coronavirus. There is an emergence need to use rapid diagnosing tools to provide in-time treatment of severe or critical patients with COVID-19 and that controls the fast spreading of the infection. Most of the countries utilizing diagnostic kits approved by the FDA (Food and drug administration) which directly detect the SARS-CoV-2 RNA and serological methods that diagnose Covid-19 patients indirectly by measuring the elevated levels of immunoglobulins. On the other hand, artificial intelligence (AI) has a pivotal role to find Covid 19 patients with chest computed tomography (CT). The present review summarizes the details, merits, and demerits of various direct (Real-time PCR, Reverse-transcription-loop-mediated isothermal amplification, Antigen-based tests, etc.) and indirect (Enzyme-linked immune assay, Chemiluminescent immunoassay, Rapid serological tests, Biolayer interferometry immunosorbent assay, Integrated AI with chest CT, cPass Neutralization antibody detection, etc.) diagnose methods for quick screening of Covid-19 patients.

Keywords: Diagnosis of Covid-19; Real time PCR; Integrated AI with chest CT; Biolayer interferometry immunosorbent assay; Neutralization antibody detection.

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ISBN: 978-81-948668-4-8

978-81-948668-4-8

Published by:
A.A. Research Publication

ICCRTESM-2021

SAMBHRAM
INSTITUTE OF TECHNOLOGY

International Conference on Current Research Trends in Engineering, Science & Management

Conference World

www.conferenceworld.in

29 March 2021

Editors
Dr. H.G.Chandrakanth
Dr. C.V. Ravishankar

Conference Proceedings

International Conference on Current Research Trends in Engineering, Science & Management (ICCRTESM-2021)

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Evaluation of Anti Oxidant and Anti Hyperlipidemic Activity of Polyherbal Formulation in Albino Wistar Rats

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This Study includes the investigation of anti hyperlieimic activity of an ethanolic extract of a herbal preparation from a combination of three indian medicinal palnts consisting of leaves of plants O. sanctum ,aegle marmelos, *Syzygium* cumini against Triton WR-1339 induced hyperlipidemia in male Wistar rats.The preclinical study was ventured to assess the anti hyperlipaedimic effect of poly herbal formulation by using Triton WR-1339 induced hyperlipaedimia.The present study consists of five groups of six animals composed of normal control,Diseased control,Triton and polherbal treated group (PHF 300), Triton and polherbal treated group (PHF 600),Triton and Atorvastatin treated group.In Over night fasted wistar rats hyperlipaedimia was induced by single intravenous injectionof2ml/kg or 200mg/kg of Triton WR-1339 in normal saline (0.9% Nacl),serum Total cholesterol(TC),Triglyceride(TG),LDL-Cholestrol,andVLDL. To the triton induced hyperlipaedimic rats, the poly herbal formulation (300 and 600 mg/kg/b.w/p.o) and Atorvastatin (10mg/kg/b.w/p.o) was administered orally for seven days. There is a significant reduction in LDL-C,VLDL,Serum total cholesterol, triglycerides , Atherogenic index, and there is a increase in HDL-C levels in poly herbal formulation treated grouped when compared to Triton treated group. With the standard drug Atorvastatin (10 mg/kg/b.w. /p.o.), in treatment of hyperlipidemia the poly herbal formulation treated grouped exhibited competitive potential exhibiting a alternative natural therapeutic agent.

Keywords: Anti hyperlieimic Activity, Wistar rats, Triton WR-1339,O.sanctum

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Enhancement of Solubility of Rosuvastatin by Liquisolid Technique

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Rosuvastatin is a poorly water soluble drug and the rate of its oral absorption is often controlled by the dissolution rate in the gastrointestinal tract. Hence it is necessary to increase the solubility of the Rosuvastatin. Several liquisolid tablets formulations containing various drug concentrations in liquid medication (10% w/w) were prepared. The ratio of Avicel PH 102 (carrier) to Aerosil 200 (coating powder material) was kept 5, 10, and 15. The prepared liquisolid systems were evaluated for their flow properties. The liquisolid system showed acceptable flow properties. The tabletting properties of the liquisolid compacts were within the acceptable limits. Liquisolid compacts demonstrated significantly higher drug release rates than those of conventional and marketed tablet due to increasing wetting properties and surface area of the drug. This study shows that liquisolid technique is a promising alternative for improvement of the dissolution rate of water insoluble drug.

Keywords: Rosuvastatin, Avicel PH 102, Aerosil 200, liquisolid system

Development and Validation of UV Spectrophotometric Method for the Estimation of Favipiravir In Bulk And Pharmaceutical Formulation

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Favipiravir is a class of Anti-Viral medication used to treat viral infections. A specific and economic UV spectrophotometric method has been developed using 0.1N NaOH. To determine the Favipiravir content in bulk and pharmaceutical dosage formulations at a predetermined λ max of 238nm, it was proved. Beer limits in the range of 1-15 µg/ml and exhibited good correlation coefficient ($R^2 = 0.998$) and regression equation was found to be (y=0.054x-0.003).This method was successfully applied in the determination of Favipiravir content in marketed brand from local market and the results were in good agreement with the label claim. The method was validated according to ICH guidelines for linearity, Accuracy, Precision, Robustness, and Ruggedness the obtained results proved that the method can be employed for the routine analysis of Favipiravir in bulks as well as formulation.

Keywords: Favipiravir, UV Spectrophotometric method, linearity, Accuracy, Precision.

Preliminary Phytochemical Screening and Antihelmintic Activity of *Crossandra infundibuliformis* Root Extract

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Phytochemicals have attracted the attention of scientists due to the development of new and sophisticated techniques. These techniques play a significant role in giving the solution to systematic problems on the one hand and the search for additional resources of raw materials for pharmaceutical industries on the other hand the plant synthesizes a wide variety of chemical compounds which can be shorted by the chemical class, bio synthetic origin on functional groups into primary and secondary metabolites. After thorough literature survey the plant was selected for its unique chemical constituents that are expected to show different activities. The aim of the present study was to investigate the presence of Phytochemical constituents of roots of ethanol, chloroformic and acetone extracts of Crossandra infundibuliformis. Our results clearly indicate that the presence of flavonoids, Tannins, saponins and steroids in ethanolic root extracts of the plant. In the present study, it was found that ethanolic root extract of Crossandra infundibuliformis showed promising antihelmintic activity. The wormicidal activity of ethanol extract suggests that it is effective against parasitic infections of humans. the plant extracts have shown significant results with increasing dose response. This findings provides some biochemical basis for the use of root extracts of the as anti helmintic agent having curative effect. Further, studies are required to gain more insight for the possible mechanisms of action and uses.

Keywords: *Crossandra infundibuliformis*, Phytochemical constituents, Antihelmintic activity

In vivo Antioxidant Activity of *Muntingia Calabura* Leaves Extracts in Albino Rats

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In human body, about 5% of the inhaled oxygen is converted into reactive oxygen species resulting in cellular damage. As a defense mechanism, antioxidants block the process of oxidation by neutralizing free radicals. To satisfy the intended use, it is essential to assess the *in-vivo* antioxidant potential of the pertaining compound. It may be assessed by the effect of antioxidant compounds on the level of oxidation in biological fluids and tissues of humans and experimental animals after intake of antioxidants. These studies are necessary for elucidation, understanding and evaluation of antioxidant action, capacity and efficacy in human system. So the present study was carried out to evaluate the Antioxidant activity of aqueous and methanolic extracts prepared from the leaves of *Muntingia calabura* L.The leaves of *Muntingia calabura* were collected cleaned using running water, dried in a shady place, powdered and macerated with water and methanol for the preparation of extracts. Albino rats weighing 150-200g were randomly divided into five groups, each with 6 animals.Administrations were done orally for 21 days. 24hr after the last dose, all animals were anesthetized; blood samples were collected and centrifuged to obtain plasma for DPPH and reducing power test. Animals were sacrificed; liver and kidney were dissected to prepare homogenate for the estimation of MDA, GSH and CAT. The results were expressed as mean±s.d. One-way ANOVA followed by Dunnet's "t"- test was performed. Differences were considered significant at $p < 0.05$.The results showed that oral administration of extracts leads to increased plasma antioxidant capacity toward DPPH radical and caused amelioration in the liver and kidney antioxidant status by decreasing the MDA concentration and increasing the rate of GSH and CAT.Hence, it can be concluded that the *Muntingia calabura* leaf extracts has exhibited *in vivo* antioxidant activity

Keywords: *Muntingia calabura,* Antioxidant activity, Methanol, One-way ANOVA.

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Evaluation of Physicochemical and Binding Properties of *Lannea coromandelica* (Houtt.) Merr Gum in Tablet Formulation

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A mucilaginous gum, known as Jhingan gum/ Gumpena gum, exudes from wounds and cracks in the barks of *Lannea coromandelica* belongs to the family Anacardiaceae. The gum occurs in round tears or colourless fissured angular fragments like Acacia gum. It is yellowish white when fresh, turning brown and ultimately black on drying.. It is mostly used in confectionery; but small quantities of the gum are reported to be exported from India from this purpose. But very few attempts are done to explore gumpena gum's potential as pharmaceutical excipients. The gum powder was evaluated for its physicochemical properties. Tablets of diclofenac sodium were prepared by wet granulation method using purified gum powder and polyvinyl pyrrolidine at different concentrations. Pre and post compression parameters were evaluated for powder blend and prepared tablets. FTIR studies were conducted to characterize drug excipient compatibility. The physical appearance of LG was observed to be light brown and have sand like texture and all other parameters were found to be within limits. The results post compression parameters are good proving that the gum has excellent binding properties. In conclusion, the present work revealed that the *Lannea coromandelica* gum is a potential candidate for use as a binder in the formulation of Diclofenac sodium tablets. Because *Lannea coromandelica* gum showed excellent micromeritic and binding properties it can be used as a substitute or in combination with the currently available synthetic binders.

Keywords: *Lannea coromandelica,* Diclofenac sodium tablets, Acacia gum, Micromeritic and Binding properties.

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Evaluation of Methonalic Extracts of Acorus Calamus on Plasma Lipid Levels in Triton – X-100 Induced Hyperlipidemia Wister Rat's Model.

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Present research work is involved with evaluation of Acorus Calamus extract on plasma lipid levels of Triton-100 induced hyperlipidemia rat model. Among the two doses 500mg/kg decrease the lipid parameters more significantly than 250mg/kg hence the increased dose is more protective than the lowered dose. Thus the effect has been seen to be dose dependent manner. Further investigation and characterization of phytoconstituents and further experimentation is required to elucidate the exact mechanism of action of Acorus Calamus and to find out the specific phyto constituents that were responsible for observed antihyperlipidemic activity. In conclusion our results suggests that the post treatment with phenolic and methonalic / triterpenoidal extract of Acorus Calamus (AC) showed dose dependent antihyperlipidemic activity against triton –X-100 and high fat diet induced hyperlipidemia indication that actually naturally occurring plant components phenolic and triterpeniods of this plant may be used as starting structures for the potential development of antihyperlipidemic agent

Keywords: *Acorus Calamus*, Triton-100, Phenolic and Methonalic / triterpenoidal

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Development and Validation of Novel Spectrophotometric Methods for the Determination of Cefixime Trihydrate in Bulk and Pharmaceutical Formulation

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Cefixime trihydrate is a broad spectrum third generation cephalosporin targeting a wide range of gram positive and gram negative organisms and is used to treat certain infections caused by bacteria such as bronchitis, gonorrhea, and infections of the ears, throat, tonsils and urinary tract. A specific and economic UV spectrophotometric method has been developed using Acetonitrile and Water (1:1) as solvent at a predetermined λmax of 239nm. Beer limit was found in the range of 8-16 µg/mL and exhibited good correlation coefficient (r^2 = 0.998) and the regression equation was found to be y=0.0376x+0.0892.This method was successfully applied in the determination of Cefixime trihydrate content in a marketed formulation from the local market and the results were in good agreement with the label claim. The method was validated according to the ICH guidelines for Range, linearity, Accuracy, Precision, Robustness, Ruggedness, LOD, LOQ and Sensitivity.The obtained results proved that the method can be employed for the routine analysis of Cefixime trihydrate in bulk as well as for formulation.

Keywords: Cefixime trihydrate, Acetonitrile and Water, UV Spectrophotometric method, Accuracy, Precision.

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Formulation and Evaluation of Irbesartan Orodispersible Tablets using Natural Super Disintegrating Agent

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Super disintegrants are the key ingredient which gives faster disintegration and/or dissolution of a drug in the form of MDT. MDTs are prepared using both natural and synthetic super disintegrant. Super disintegrant facilitates the breakdown of the tablets within a second in the mouth in the presence of saliva without any complexity of swallowing. In the present work fast dissolving tablets of irbesartan were prepared using different concentrations of natural super disintigrants. The precompression studies of all the formulations were within the acceptable. The release of drug from formulation containing 2.5% of fenugreek super disintegrant is more and is a good preparation compared to hibiscus. Fenugreek super disintegrant is better formulation. Since FF-2 released on 97.63% of the drug within 15 mins.

Keywords: Super disintegrants, Disintegration, Dissolution, Irbesartan.

Effect of Herbal Colouring Agents in the Preparation of Lipsticks

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Recently cosmetics became one of the daily usage of all groups people in the society every year out of which lipstick is used as a basic material. Aim of the present study is to know the effect of colouring agents in the preparation of lipsticks using natural ingredients like Beetroot, Tomato, Alkanet root and Cocoa powders. The prepared lipsticks were evaluated for parameters like colour, texture, melting point, pH, hardness, Softening point, solubility, microbial test, surface anomalities, perfume stability, aging stability and skin irritation..Among all the prepared lipsticks L3 shown light red colour compared to L2 means beet root extract at 1g is not sufficient to produce as dark as alkanet root extract. Further increase in beet root extract quantity may increase the colour of the product. The L4 has orange colour which gives very light shade to lips. The L1 has pale red colour which is not significantly effective colour to the lips. The herbal colouring agents have remarkable long lasting colour as compared to conventionally used colouring pigments. The herbal colouring agents don't alter any characteristic properties of lipsticks like stability, softening, breaking, melting points. Hence herbal colouring can be incorporated in lipsticks as colouring agents.

Keywords: Lipsticks, Beetroot, Tomato, Alkanet root and Cocoa powders, Hardness

Preparation and Evaluation of Herbal Balm for Stress Management

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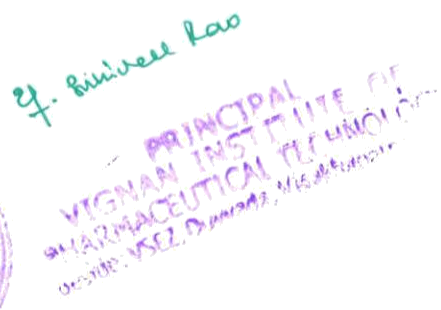
The present work focuses on the potential of herbal balm for stress management. The uses of herbal balm have been used in stress management. The prepared formulation showed good spreadability, good consistency during the study period. Stability parameters like visual appearance, nature, viscosity and fragrance of formulation showed that there was no significant various during the study period. The prepared formulation showed proper pH range i.e., approximately pH=7, it confirms the compatibility of the formulation with skin, thus extracts which we used are having minimal side effects and they have anti stress activity and also manages stress with nice fragrance. Herbal balm was prepared using three different plant extracts and was formulated and evaluated for safety and minimal side effects.

Keywords: Herbal Balm, Spreadability, Good consistency, Viscosity.



Diuretic Activity of Aqueous Extract Of *Nigella Sativa* in Albino Rats

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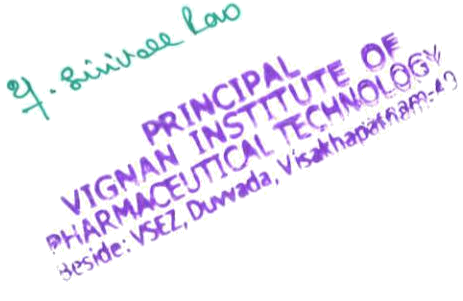
Nigella sativa is commonly referred as Black seeds. The study aims to evaluate the diuretic effect and acute toxicity of a crude aqueous extract of *Nigella sativa* using animal models. To evaluate the diuretic activity of the plant, Albino rats were divided into four groups. The control group received normal saline (10 mL/kg), the reference group received furosemide (10mg/kg) and the test groups were administered different doses (i.e., 150 and 300 mg/kg) of the crude extract by intra-peritoneal route, respectively. Graph Pad Prism was used for the statistical analysis and p-values less than 0.05 were considered statistically significant. We observed significant diuretic, kaliuretic and natriuretic effects in the treated groups in a dose dependent manner. However, urinary pH remained unchanged during the course of the study. The diuretic index values showed good diuretic activity of the crude extract. The Lipschitz values demonstrated that the crude extract, at the dose of 150 mg/kg showed more diuretic activity compared with furosemide. With regard to the acute toxicity study, no lethal effects were observed among Albino mice even at the higher dose of 300 mg/kg. The extract of *Nigella sativa*, at the dose of 300 mg/kg, significantly increased the urinary volume and modified the concentration of urinary electrolytes, and there was observed no signs of acute toxicity associated with the crude extract. Further studies are encouraged to isolate the pure phytochemical responsible for diuresis.

Keywords: *Nigella sativa,* Albino mice, Furosemide, Intra-peritoneal route.



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28th December, 2021

JOINTLY ORGANISED BY

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In vitro antioxidant and nootropic activity of *Nyctanthes arbortristis* root suspension against scopolamine induced amnesia in rats

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Nyctanthes arbortristis (NATE) ethanol extract (150 mg/kg, orally) was evaluated for its protective effect against scopolamine-induced (1 mg/kg i.p.) cognitive impairments in rats using behavioral models like radial arm maze test, Morris water maze test and active avoidance test. NATE effect was evaluated and compared with the standard piracetam (200mg/kg i.p.). NATE might be reverse the impairment produced by the scopolamine in radial arm maze test. In addition, NATE also decreased the time period taken to find the hidden platform in Morris water maze test and increased number of avoidances in active avoidance paradigm. Acetylcholinesterase activity and thiobarbituric acid levels were significantly decreased along with the rise in activities of superoxide dismutase and catalase. This might suggest that the NATE has protective effect against scopolamine-induced cognitive impairment in rats through acetylcholine muscarinic receptor pathway and also antioxidant activity. No significant changes were found in histopathological studies of brain.

Keywords: *Nyctanthes arbortristis*, Acetylcholinesterase activity, Thiobarbituric acid

Invitro Evaluation of blood coagulation activity of *Mimusops Elengi* Fruits and Development of Hemostatic Wound Dressing

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Mimusops elengi fruit is edible and is astringent in nature. This study aims at providing evidence for some of the biological activities of tannins. One such activity is checking of hemorrhage. This study was designed to determine enhancement of coagulation time by varying concentrations of *Mimusops elengi* fruit extract and to develop and evaluate haemostatic wound dressing. The Phytochemical screening of the methanolic fruit extract of *Mimusops elengi* confirmed the presence of several bioactive compounds like alkaloids, flavones, tannins and phenols which could be responsible for the versatile medicinal properties of this plant. Tannins present in this are responsible for the coagulant activity of the plant. There was a dose-dependent increase in coagulation of blood. In conclusion, our findings showed *Mimusops elengi* have the potential to be explored further to identify the coagulant compounds in this plant. This *Mimusops elengi* and its quantification of individual phytoconstituents as well as pharmacological profile based on *in-vitro* and *in-vivo* studies and on clinical trial should be further investigated.

Keywords: *Mimusops elengi,* Phytochemical screening, Methanolic extract

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In vitro Anti inflammatory activity of *Mimusops elengi* fruits

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Mimusops elengi commonly known as Bhogada is a treeis the native of western peninsula. It has made important contribution to the field of science from ancient times as also to modern research due to its large number of medicinal properties. The present finding of Photochemical screening of the hexane, chloroform, methanolic fruit extract of *Mimusops elengi* confirmed the presence of several bioactive compounds like alkaloids, flavones, tannins and phenols which could be responsible for the versatile medicinal properties of this plant. There was a dose-dependent increase in inhibition. In conclusion, our findings showed *Mimusops elengi* have the potential to be explored further to identify the anti diabetic compounds in this plant. This *Mimusops elengi* and its quantification of individual phytoconstituents as well as pharmacological profile based on *in-vitro* and *in-vivo* studies and on clinical trial should be further investigated.

Keywords: *Mimusops elengi,* Phytoconstituents, Anti-diabetic

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Pyroglutamic Acid Derivatives Synthesis, Characterization and in vitro Anti Microbial Activity

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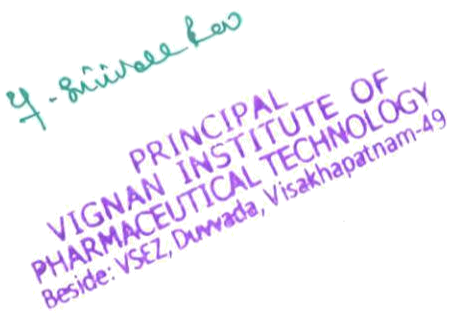
The present study is aimed to identify the compounds that can cure drug resistance problem by drug resistance reversal. Now-a-days most of the antibacterial and mycobacterial drugs have got the difficulty of developing drug resistance due to drug resistant microbes. This could also be due to irrational use of antibiotics neglecting body's demands. In this search, we found pyroglutamic acid derivatives as the novel ones and conducted a preliminary study on the available gram positive and gram negative organisms in our lab. The synthesis, structural characterizations were done as a part of the findings. Among the eight synthesised compounds aniline derivatives showed promising results when compared with the standard drug.

Key words: Drug resistance, Pyro glutamic acid, Microbes, Synthesis



Effect of *Cucumis melo* seeds extract on wound healing activity in albino wistar rats

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Delayed wound healing is a major complication attributed in the mankind due to various reason. The wound may be occurs in external as well as internal injuries with respect to excision or incision. In the present study the ethanolic seed extracts of *Cucumis melo* is evaluated for wound healing activity in excision wound model in albino wistar rats. Excision wound was inflicted by cutting away a 500 mm^2 full thickness of skin from a traced area and left undressed to the open environment. Wound contraction was measured as percent contraction in each 2 days after wound formation. The wounds were left undressed to the open environment and observed daily. 10% & 50% ointment is prepared with simple ointment base and were applied topically twice a day, starting from the wound induction to 18 days. The soframycin is used as standard drug to compare the healing activity. The selected seed extract ointment showed a dose dependent healing effect compared to the diseased control group. The healing effect might be due to its active constituent like w phenol , Flavonoids, Fatty acids , Linoleic acid, α-Linolenicacid, Phenolic Glycosides&Chromone derivatives which helped in free radical scavenging, enhancement of collagen and rapid angiogensis to contribute early wound healing effect.

Keywords: *Cucumis melo* seeds, soframycin, Albino wistar rats

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Synthesis, Characterization and Antimicrobial Evaluation of Isoxazoles

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Isoxazole is an azole with an oxygen atom next to the nitrogen. Isoxazole rings are found in some natural products, such as ibotenic acid and also found in a number of drugs, including COX-2 inhibitor valdecoxib. Furoxan, a nitric oxide donor is containing isoxazolyl group and found in many β-lactamase resistant antibiotics, such as cloxacillin, dicloxacillin and flucloxacillin. The synthetic androgenic steroid danazol also has an isoxazole ring. The substituted isoxazoles are well developed in literature to possess significant biological activities. The disubstituted and trisubstituted isoxazoles have been reported to exhibit broad range of biological activities such as antimicrobial activity, analgesic activity, anti-inflammatory activity, antioxidant activity, anticancer activity, CNS (central nervous system) activity, antitubercular activity and miscellaneous activities like GABA (γ-amino butyric acid) agonistic activity, inhibitory activity, antihypertensive activity, and glutamate transporter activity. The present review summarizes up to date information of various biological activities of isoxazole analogs.

Keywords: Isoxazole, COX-2 inhibitor, Biological activities

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Synthesis, Characterization and Anti microbial activity of some new Schiff bases

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A series of Schiff bases was achieved from the starting material ethyl 4-fluoro benzoate which was converted to the corresponding 4-fluoro benzohydrazide by its reaction with hydrazine hydrate in absolute ethanol and the obtained 4-fluoro benzohyrazide reacts with different aromatic aldehydes in acidic medium. The structures of all Schiff bases were characterized on the basis of physical, chemical tests and spectroscopic data. These compounds were tested for anti-bacterial and anti fungal activity using cup-plate method.

Key words: Schiff bases, Antimicrobial activity, Antifungal activity

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Development and Validation of New Spectrophotometric Method for the Determination of Celecoxib in Pharmaceutical Dosage Form

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Two simple and sensitive spectrophotometric methods have been developed for the estimation of Celecoxib in bulk and pharmaceutical formulations. Method A is a UV Spectrophotometric method using chloroform and method B using Isopropyl alcohol as a solvent in which drug showed maximum absorbance at 260 nm and 255 nm. Beer's law was obeyed in the concentration range of 2-10 µg/mL with correlation coefficient 0.998. The results of the methods have been validated statistically and by recovery studies confirmed the accuracy and precision of the methods. The proposed methods are simple, sensitive and economical for quantitative determination of celecoxib in bulk drug and Pharmaceutical formulation.

Keywords: Celecoxib, Beer's Law, UV Spectrophotometry

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Formulation and Evaluation of Oral dispersible tablets of Amlodipine

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An attempt has been made for the development of rapidly disintegrating oral tablets of Amlodipine Besylate by direct compression method. In this study, fast dissolving tablets of Amlodipine Besylate using different superdisintegrants were prepared by direct compression method. FDT's were evaluated for its physicochemical properties and in vitro dissolution. Effect of different superdisintegrants on disintegration behaviour of tablets was evaluated in phosphate buffer pH 7.2. All formulations were evaluated for pre-compression and post- compression parameters. Wetting time of formulations containing Crosscarmellose sodium was least and tablets showed fastest disintegration. FT-IR studies revealed that there was no physicochemical interaction between amlodipine besylate and other excipients. Of the twelve formulations studied, F10 showed short dispersion time with maximum drug release in 30 minutes. Combinations of super disintegrants were found to be better in the formulation of fast dissolving tablets of Amlodipine besylate rather than using alone.

Keywords: Amlodipine Besylate, Fast dissolving tablets, FTIR

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Development and Validation of Spectrophotometric Methods for the Estimation of Ticagrelor in Pure and Dosage Form

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Two simple and sensitive spectrophotometric metods have been developed for the estimation of Ticagrelor in bulk drug and pharmaceutical formulation. Method I is a UV Spectrophotometric method using isopropyl alcohol as a solvent in which drug showed maximum absorbance at 245nm. Beer's law was obeyed in the concentration range of 2-30µg/ml with correlation coefficient 0.999. Method II is based on a charger transfer complexation with 0.1% w/v solochrome black T in the chloroform to form pink colored chromogen which showed maximum absorbance at 507nm. Beer's law obeyed in the concentration range of 2-10µg/ml with correlation coefficient 0.999. The results of the method have been validated statistically and by recovery studies confirmed the accuracy and precision of the methods. The proposed methods are simple, sensitive and economical for quantitative determination of Ticagrelor in bulk drug and pharmaceutical formulation.

Keywords: Ticagrelor, Beer's law, UV spectrophotometry

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A Comparative Study of Different Solid Dispersions of Telmisartan

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Telmisartan is an angiotensin II type -1 receptor antagonist, used in the treatment of essential hypertension. Telmisartan belongs to class II under biopharmaceutical classification system, characterized by low solubility and high permeability. Oral absorption of Telmisartan is dissolution rate limited and it requires enhancement of solubility and dissolution. The main objective of the present study is to increase the solubility and dissolution rate of telmisartan through solid dispersion technology using different approaches of solid dispersion methods. Solid dispersions were prepared by solvent evaporation technique and by fusion method using methanol as solvent and PEG 4000 as carrier in the ratio of 1:1, 1:2 and 1: 4. Solid dispersion of telmisartan was prepared by a Solvent evaporation and Fusion method showed significantly higher drug solubility in comparison with pure drug. FTIR studies showed no evidence of interaction between the drug and carrier.Between methods of preparation of SD, solvent evaporation has shown greater drug release than fusion method at equal proportion. This is may be due to SD obtained by solvent evaporation is more amorphous than Fusion method.

Keywords: Telmisartan, BCS system, Solubility, Solid dispersion

Development and Validation of stability indicating Visible Spectrophotometric method for estimation of Furazolidone in pharmaceutical formulation and urine.

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A simple, accurate, specific and economical spectrophotometric method has been developed and subsequently validated for determination of furazolidone in bulk, pharmaceutical dosage form and urine. The method is based on visible spectrophotometric using methanol as solvent and the λmax is found to be 396.5nm. The linearity of furazolidone was found to be 5-30µg/ml with correlation coefficient (R^2) 0.9959. This method was validated for linearity, range, precision, specificity, and sensitivity. Further, Furazolidone was subjected to stress under acidic, alkali, photolytic, oxidative and thermal conditions. % drug recovery from urine was also calculated.

Keywords: Furazolidone, Spectrophotometric method, Oxidative, Thermal conditions

Determination of Biological Activities of Marine Algae Collected From Yarada and Tenneti Park Beach

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Determination of biological activities of marine algae collected from Visakhapatnam coastal region as Visakhapatnam coast is abundant in marine algae and very convenient place for selection and isolation of different species of algae. Antibacterial activity of algal extracts determined by well diffusion method, antioxidant activity was determined by Reducing power method and DPPH radical scavenging method finally anti-inflammatory activity was determined by Human red blood cell stabilization method and Egg albumin method. Methanolic extracts of three algae has potential inhibition activity against *E. coli*, *B. subtilis*, *P. aeruginosa* and *S. aureus*. Green alga *Enteromorpha compressa* has better antioxidant activity compared to the *Gracilaria arcuata* and *Ulva fasciata* when tested in reducing power and DPPH method. *Ulva fasciata* found good anti-inflammatory activity among the selected three algae.

Keywords: Red blood cell, Stabilization method, Algal extracts, Antibacterial activity

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Comparative study of marketed Metoprolol succinate extended release Tablets

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Metoprolol succinate is a beta blocking antihypertensive agent which is completely and rapidly absorbed after oral administration. A conventional dosage form should be taken four times a day leading to poor patient compliance .In order to improve patient compliance Metoprolol succinate extended release tablets are available. Three commercially available marketed products of Metoprolol Succinate extended release tablets were selected and evaluated for their physical appearance, tablet size and thickness, uniformity of weight, average weight of tablets , hardness test , friability and *invitro* dissolution test . Dissolution studies were carried out using pH 1.2 HCl buffer and pH 6.8 phosphate buffer. The values of all the products were to be compared. And based on these values we can select the best product.

Keywords: Metoprolol succinate, Uniformity of weight, Hardness test.

Effect of selected herbal formulations on haloperidol induced catalepsy in albino mice and evaluation of *in vitro* anti-oxidant activity

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Neuroleptic drugs (D2 blockers) which are used for the treatment of psychotic disorders, especially for schizophrenia, are known to produce extra-pyramidal side effects (EPS). Catalepsy was induced by these drugs in animals and these animals have been used as models to study the extra-pyramidal side effects which are associated with anti-psychotic agents in human beings. In the present study, we found out the in-vitro antioxidant activity and protective effect of the polyherbal formulation on haloperidol (2.0 mg/kg po administration) induced catalepsy in mice, by employing the standard bar test and the assessment of the locomotor activity. The mice were allocated to six groups, with each group containing six animals. The effects selected doses of formulation and the standard drug, trihexyphenidyl (0.1mg/kg) were assessed after their repeated dose administration in mice for fourteen days, 30 minutes prior to the administration of haloperidol. A significant ($P<0.001$) reduction in the cataleptic scores was observed in the test drug treated groups as compared to the toxic control, with a maximum reduction in the group with a formulation dose 200 mg/kg. Similarly, our study suggested that our formulation significantly reduced the oxidative stress and the cataleptic score which was induced by haloperidol. Hence, it could be used to prevent the drug- induced extra-pyramidal side effects.

Keywords: Neuroleptic drugs, Polyherbal formulation, Haloperidol, Antioxidant activity

Synthesis, characterization and anti microbial activity of some new isoxazoles

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Chalcones were synthesized by Claisen-shmidt reaction involves reacting 2-acetyl-6-methoxy naphthalene with various aromatic aldehydes in ethanolic KOH solution. These chalcones were immediately reacted with hydroxylamine hydrochloride in presence of glacial acetic acid as reagent to obtain the corresponding isoxazole derivatives. The synthesized isoxazoles were characterized on the basis of physical, chemical tests and spectroscopic data. These compounds were tested for anti-bacterial and anti fungal activity using cup-plate method.

Keywords: Isoxazoles, Claisen-shmidt reaction, Anti bacterial activity, Anti fungal activity

In vitro bioequivalence studies of six brands of Sustained release Metformin HCl Tablets

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Pharmaceuticals dosage form efficacy generally depends on their formulation properties and manufacturing methods, hence it is likely that the quality of dosage form may vary. Metformin hydrochloride is an oral anti-diabetic drug used mainly to treat type II diabetes mellitus and available as several brands in the market which make it difficult to select the safe, effective and economic one. The aim of this work was to check, compare and evaluate the quality standards of different brands of Metformin hydrochloride Sustained Release (SR) tablets available in local market of Visakhapatnam, Andhra Pradesh, India. Bio equivalence studies are the commonly accepted methods displaying therapeutic equivalence between two products. This study was conducted to evaluate the bioequivalence between different formulations of Metformin 500mg which are marketed in and around Visakhapatnam, Andhra Pradesh. Test for weight variation, hardness, friability, disintegration time, and dissolution were conducted. The dissolution test was performed at pH 6.8 for all the brands of the tablet. Further all the tablets passed weight variation, hardness, friability and disintegration test as per the pharmacopoeial standards.

Keywords: Metformin hydrochloride, Dissolution test, Bio equivalence studies

A Comparative Study of Capsules and Orodispersible Tablets of Lansoprazole: An Established Proton Pump Inhibitors

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The drug Lansoprazole a proton pump inhibitor degrades rapidly in acid medium . It is available for oral administration as capsule containing enteric coated granules and also as orodispersable tablet which is a new patient- friendly formulation that is easy to swallow and can be taken orally with or without water. Lansoprazole orodisprsable tablet contains enteric coated granules of lansoprazole compressed with an inactive, rapidly dispersing matrix to form a tablet . Marketed products of Lansoprazole orodipersable tablets and lansoprazole capsule were selected and these two products i.e orodispersable tablets and capsules were evaluated for weight variation, uniformity of thickness, friability, drug content uniformity , disintegration and dissolution studies and their similarity factor is determined.

Keywords: Lansoprazole, BCS system, Orodispersable tablets

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