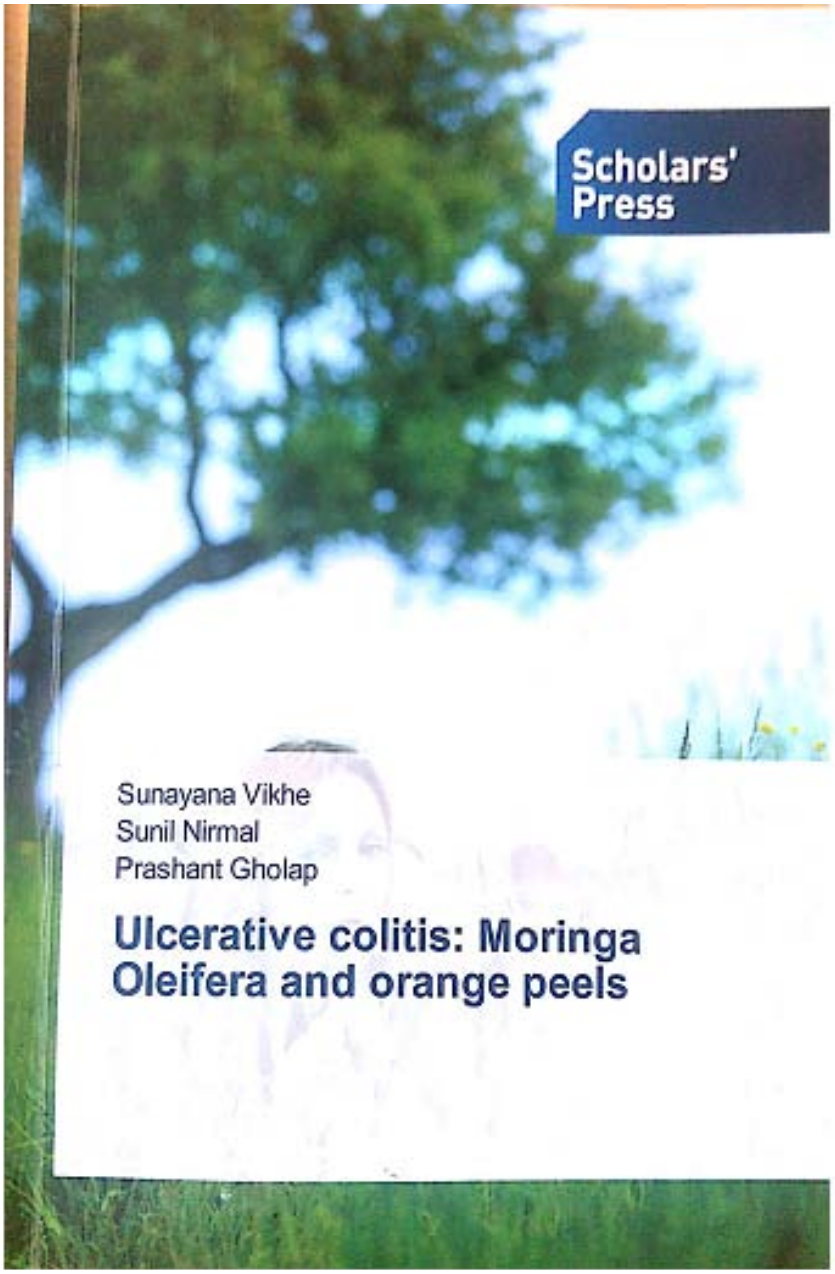
DETAILS OF PUBLISHED BOOKS AND CONFERENCE PROCEEDINGS

MS. SUNAYANA VIKHE



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Priya

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"POTENTIAL OF MIXTURE OF MORINGA OLEIFERA AND ORANGE PEEL IN THE TREATMENT OF ULCERATIVE COLITIS"

SUNAYANA VIKHE

SUNIL NIRMAL

PRASHANT GHOLAP

Principal
Pravara Rural College of Pharmac
Pravaranagar, A/p. Loni-413736

Ulcerative colitis: Moringa Oleifera and orange peels

"Herbs for Ulcer: Safe and Effective" Potential of Moringa oleifera and Orange peels extract in the treatment of Ulcerative colitis. Ulcerative colitis (UC) is a subcategory of inflammatory bowel disease. The term inflammatory bowel disease refers to a large group of disorders that affect the gastrointestinal system. Inflammation is a process that occurs when the body's immune system begins to fight off foreign invaders, such as viruses, bacteria, and fungi. The immune system is a network of organs, tissues, cells, and chemicals designed to kill invading organisms. Some of the chemicals produced by the immune system irritate the body's own tissues. They cause heat, redness, swelling, and loss of function. These changes are all characteristic of inflamed tissue inflammatory bowel disease (IBD) conventionally is divided into two major subtypes: ulcerative colitis and Crohn's disease. Present book gives the use of Moringa oleifera and Orange peels extract in the treatment of Ulcerative colitis.

Prof. SUNAYANA RAHUL VIKHE; M. Pharm. (Pharmacognosy) Assistant Professor, Department of Pharmacognosy, Pravara Rural College Of Pharmacy A/P- Loni, Tal- Rahata, Dist-Ahmednagar, Pin-413736, Maharashtra.

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DR. R J BHOR

It gives me immense pleasure to offer our students the first edition of my book on Organic Reaction and Poly Cyclic Chemistry for F.Y. B.Pharm and S.Y. B.Pharm as per SPPU syllabus. It is also used for bachelor of sciences i.e. B.Sc students. The Salient Features of this book is given below;

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- Deep knowledge for various types of organic reaction with their mechanism
- Nomenclature of various Poly cyclic compounds

Mr. Rohit Jaysing Bhor earned his B.Pharm in 2009 and M.Pharm (Pharmaceutical Chemistry) in 2011, from MGV's College of Pharmacy, Panchavati, Dist: Nasik. He passed bachelor and Master degree from University of Pune, Maharashtra, India. Mr. Rohit Jaysing Bhor has taking admission for PhD from PIMS Deemed University in 2015. An M.Pharm Project topic is "N N Aryl/Alkyl 2 phenyl Quinazolin N acetamide derivative" from MGV College of Pharmacy Nashik (Pune University). A PhD Project topic is "Synthesis and In-vitro Activity of Chromones and Azole Derivative" from PIMS Deemed University.
He then joined PRES College of Pharmacy (For women), Chincholi, Tal: Sinner, Dist: Nasik as a Lecturer in 2012 and is currently working as Assistant Professor. He has many International Research Publication and 9 Review publication in Peer reviewed journals and many seminar attained by him. He has presented 2 posters Presentation in IPC and IPA. Mr. Rohit Jaysing Bhor has authored a book on Pharmaceutical Organic Chemistry-I by Unicorn Book Publication. He is research guide for undergraduate student of Pharmacy. He got PG Approval from Savitribai Phule Pune University.

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NAME ORGANIC REACTION AND POLY CYCLIC CHEMISTRY

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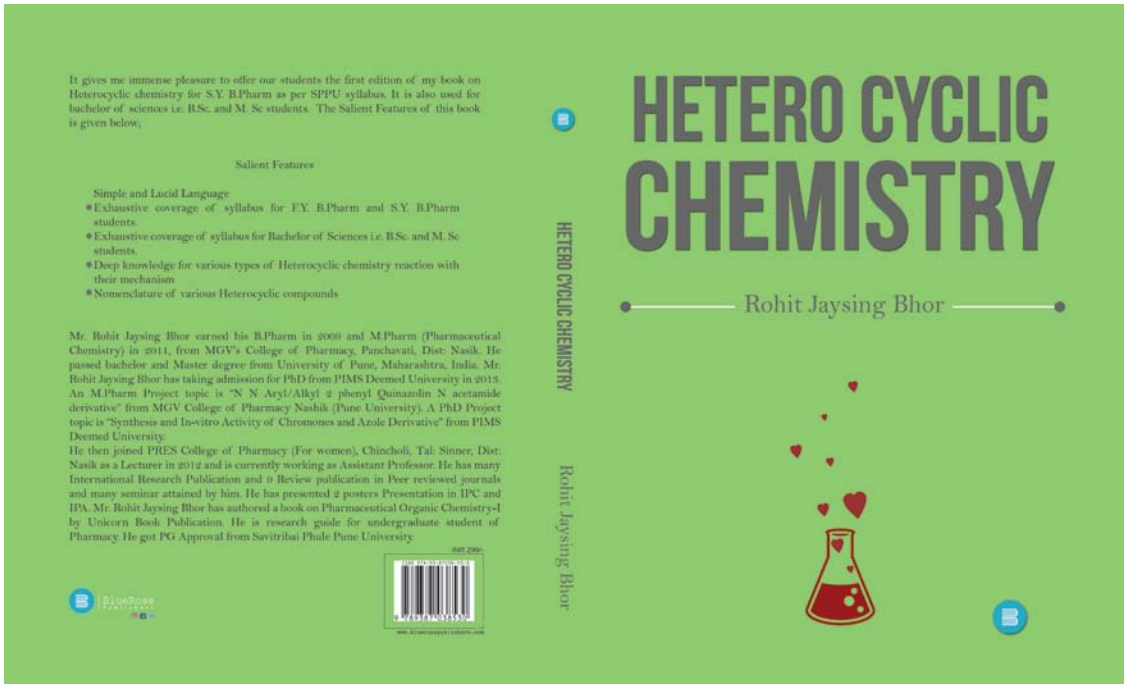

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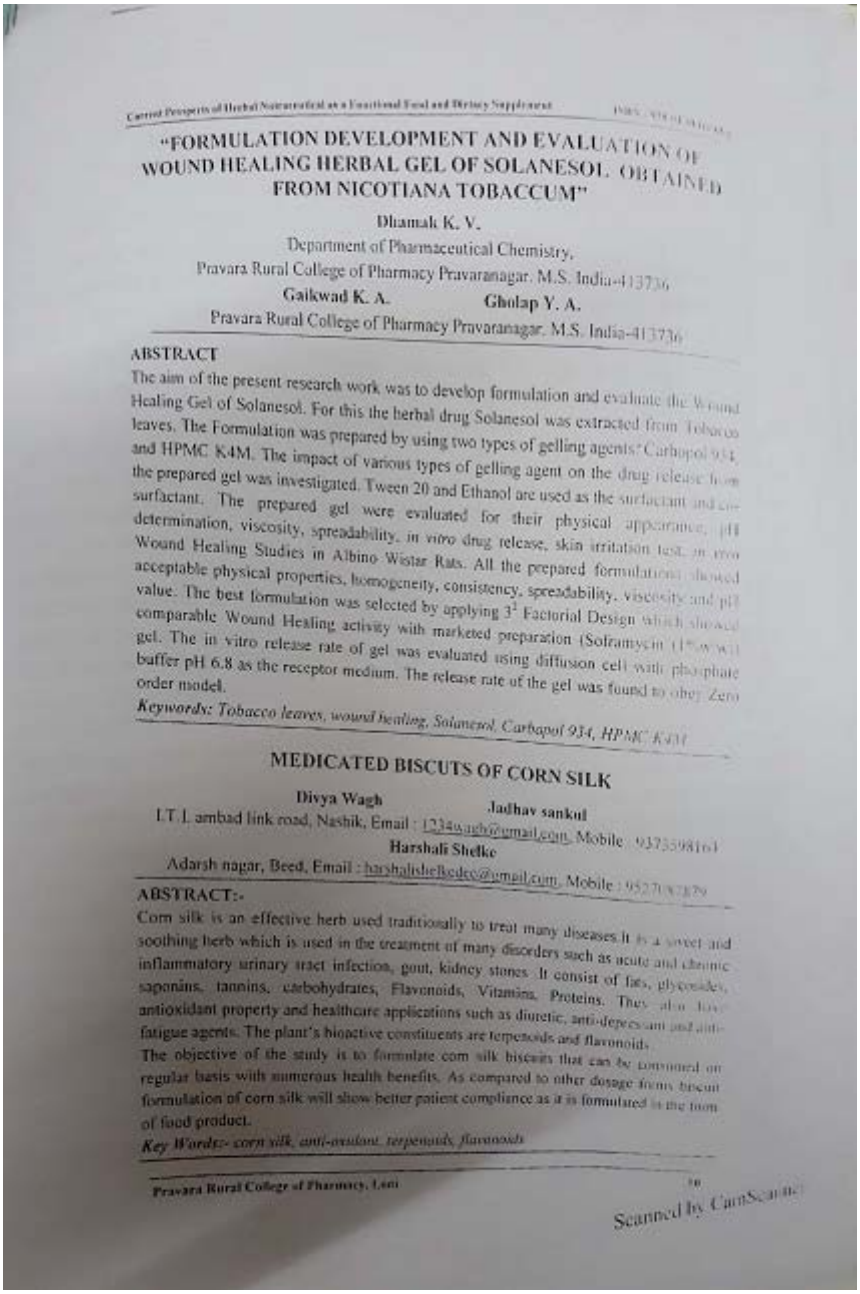

Current Prospects of Herbal Nutraceutical as a Functional Food and Dietary Supplement

"FORMULATION DEVELOPMENT AND EVALUATION OF WOUND HEALING HERBAL GEL OF SOLANESOL OBTAINED FROM NICOTIANA TOBACCUM"

Dhamak K. V.
Department of Pharmaceutical Chemistry,
Pravara Rural College of Pharmacy Pravaranagar. M.S. India-413736
Gaikwad K. A. **Gholap Y. A.**
Pravara Rural College of Pharmacy Pravaranagar. M.S. India-413736

ABSTRACT

The aim of the present research work was to develop formulation and evaluate the Wound Healing Gel of Solanesol. For this the herbal drug Solanesol was extracted from Tobacco leaves. The Formulation was prepared by using two types of gelling agents? Carbopol 934 and HPMC K4M. The impact of various types of gelling agent on the drug release from the prepared gel was investigated. Tween 20 and Ethanol are used as the surfactant and co-surfactant. The prepared gel were evaluated for their physical appearance, pH determination, viscosity, spreadability, in vitro drug release, skin irritation test, in vivo Wound Healing Studies in Albino Wistar Rats. All the prepared formulations showed acceptable physical properties, homogeneity, consistency, spreadability, viscosity and pH value. The best formulation was selected by applying 3^2 Factorial Design which showed comparable Wound Healing activity with marketed preparation (Soframycin (1% w/w) gel. The in vitro release rate of gel was evaluated using diffusion cell with phosphate buffer pH 6.8 as the receptor medium. The release rate of the gel was found to obey Zero order model.

Keywords: Tobacco leaves, wound healing, Solanesol, Carbopol 934, HPMC K4M

MEDICATED BISCUTS OF CORN SILK

Divya Wagh **Jadhav sankul**
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Harshali Shelke
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ABSTRACT:-

Corn silk is an effective herb used traditionally to treat many diseases.It is a sweet and soothing herb which is used in the treatment of many disorders such as acute and chronic inflammatory urinary tract infection, gout, kidney stones .It consist of fats, glycosides, saponins, tannins, carbohydrates, Flavonoids, Vitamins, Proteins. They also have antioxidant property and healthcare applications such as diuretic, anti-depressant and anti-fatigue agents. The plant's bioactive constituents are terpenoids and flavonoids.

The objective of the study is to formulate corn silk biscuits that can be consumed on regular basis with numerous health benefits. As compared to other dosage forms biscuit formulation of corn silk will show better patient compliance as it is formulated in the form of food product.

Key Words:- corn silk, anti-oxidant, terpenoids, flavonoids

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Formulation Development and Evaluation of Wound Healing Herbal Gel of Solanesol obtained from Nicotiana tobacum

Dr. Santosh Chhajed
Co-ordinator

Dr. Deepak Bhambere
Co-ordinator

Dr. Sanjay J. Kshirsagar
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DR. N S DIGHE

Current Prospects of Herbal Nutraceutical as a Functional Food and Dietary Supplement ISBN : 978-93-88141-65-0

ANALYTICAL METHOD DEVELOPMENT AND VALIDATION FOR QUANTITATION STUDIES PRAZIQUANTEL AND PYRANTEL PAMOATE IN BULK DOSAGE FROM BY RP-HPLC.

Dr. N. S. Dighe **Mrs. K. V. Dhamak** **Mr. R. G. Shete**
Department of Pharmaceutical Chemistry, Pravara Rural College of Pharmacy, Pravaranagar, M.S. India

ABSTRACT :

The Present manuscript describes a new simple, specific, precise and accurate reverse phase high performance liquid chromatography method for the RP-HPLC for quantitation studies for praziquantel and pyrantel pamoate in bulk dosage form. The quantitation studies were carried out by using C18 (250 x4.6 mm) colum with mobile phase containing methanol : water in thre ratio of80:20 buffer ph was maintained at 4.5 adjusted with 0.01m orthophosphoric acid, which is pumped at a flow rate of 0.8ml/min. The uv detection was monitored at 217nm. The peaks obtained were sharp with retention times of praziquantel and pyrantel pamoate were 5.0 min and 6.59 min respectively. The Calibration Curves were linear (R2=0.999) over the concentration from 5-10 µgml for praziquantel and pyrantel pamoate respectovely. The percentage recoveries of praziquantel and pyrantel pamoate were found to be in the range of 98.06 and 99.98 percent respect Type equation here.tively. The proposed method was validated and successfully applied to the quantitation studies of praziquantel and pyrantel pamoate in combined bulk dosage forms. The Calibration Curves were linear (R2=0.999) over the concentration from 5-10 ugml for praziquantel and pyrantel pamoate respectovely. The percentage recoveries of praziquantel and pyrantel pamoate were found to be in the range of 98.06 and 99.98 percent respectively.

Keywords: *Praziquantel, Pyrantel pamoate, Quantitation Studies, RP-HPLC*

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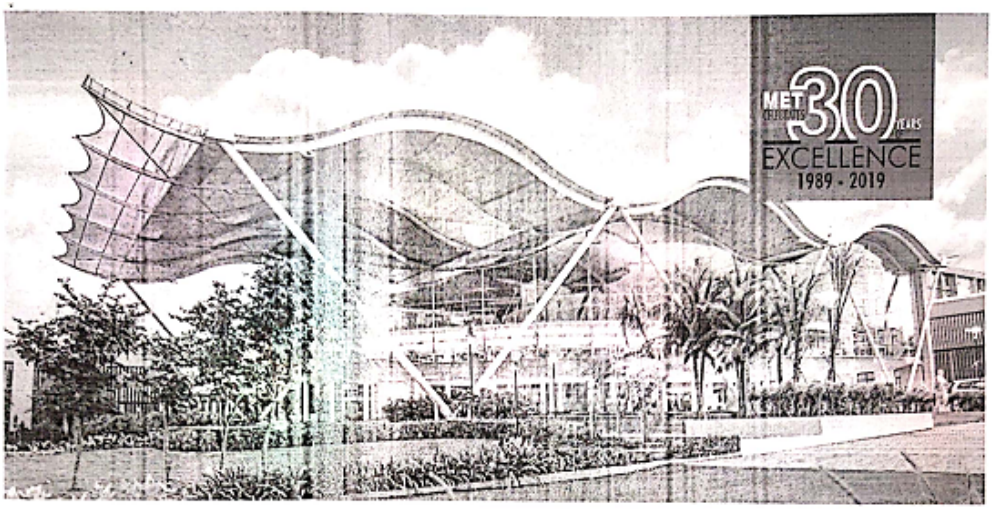

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PC 03

DEVELOPMENT AND VALIDATION OF STABILITY INDICATING RP-HPLC METHOD FOR SIMULTANEOUS ESTIMATION OF SACUBITRIL AND VALSARTAN IN BULK AND PHARMACEUTICAL DOSAGE FORM

Bhawar S. Hemlata*[1] and Jadhav M. Arti[1]
Department of Pharmaceutical Chemistry, Pravara Rural College of Pharmacy, Pravaranagar, Loni, Ahmednagar.413738
Email- dimpals@rediffmail.com | Contact- 9011785372

Abstract:
A simple, precise and reproducible Reverse Phase High Performance Liquid Chromatography method was developed and validated for simultaneous estimation of Sacubitril and Valsartan in tablet dosage form. Chromatographic separation was achieved by Grace C18 (250 mm x 4.6 ID, Particle size- 5 micron) column and methanol: water (90:10v/v) as mobile phase, at a flow rate of 1 ml/min (millilitre per minute) using UV detection at 244nm. Forced degradation experiments were carried out by exposing Sacubitril and Valsartan standard and sample for thermal, photolytic, oxidative and acid-base hydrolytic stress conditions. The retention time for Sacubitril and Valsartan were obtained as 6.984min and 5.311 min. respectively. The method has been validated for linearity, accuracy, precision, LOD, and LOQ. Linearity of Sacubitril and Valsartan were found to be 12-60µg/ml.(R2=0.9987) and 13-65µg/ml. (R2=0.9979) respectively. The accuracy of present method was evaluated at 50%, 100%, 150%. Recovery was found to be in a range from 99.13%-101.25% for sacubitril and 98.92%-101.80% for valsartan. Intermediate precision studies were carried out and the RSD values were less than 2%. Lower values of LOD (0.096µg/ml) and LOQ (0.293µg/ml) for sacubitril and LOD (0.280µg/ml) and LOQ (0.849µg/ml) for valsartan indicated good sensitivity of the method. In this study, the optimization of mobile phase, flow rate, injection volume and wavelength were achieved. This demonstrate that the developed method is simple, precise, accurate and robust for simultaneous estimation of Sacubitril and Valsartan in tablet dosage form. Themethod was acceptable for degradation studies of heat, sunlight, acid, base, peroxide which meet the acceptance criteria for forced degradation studies.

KEYWORDS: Sacubitril, Valsartan, RP-HPLC, Validation

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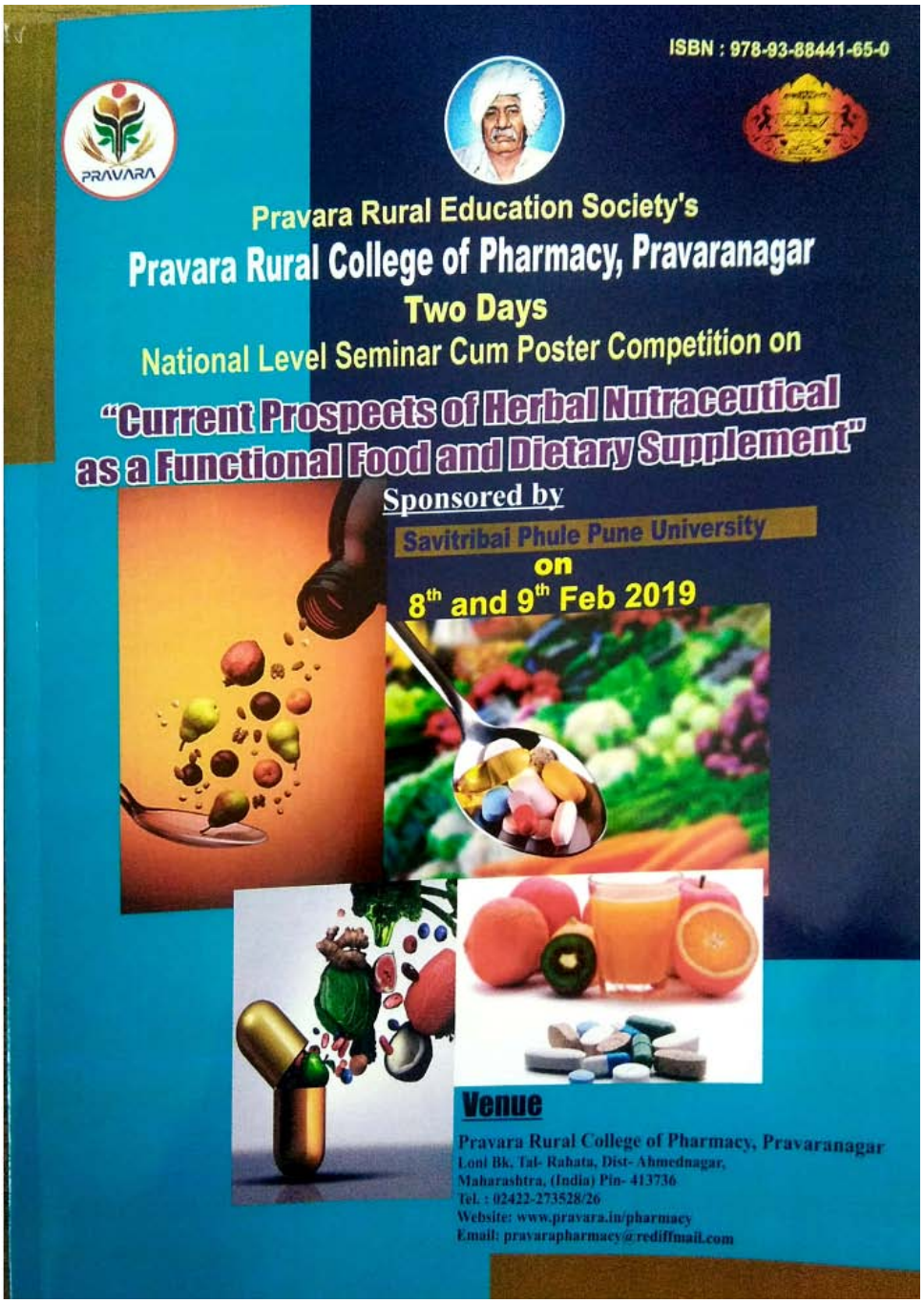

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ISBN : 978-93-88441-65-0

TO FIND THE CONTENT OF COLD DRINKS AVAILABLE IN THE MARKET

Sagar D. Magar Nachiket S. Dighe Amol S. Dighe
Ganesh S. Waghule Gangadhar V. Pawar
Pravara Rural College of Pharmacy, Pravaranagar.

ABSTRACT

Cold drinks of different brands are composed of alcohol, carbohydrates, carbon dioxide phosphate ions etc. These soft drinks give feeling of warmth, lightness and have a tangy taste which is liked by everyone. Carbon dioxide is responsible for the formation of froth on shaking the bottle. The carbon dioxide gas is dissolved in water to form carbonic acid which is also responsible for the tangy taste. Carbohydrates are the naturally occurring organic compounds and are major source of energy to our body. General formula of carbohydrates is $C_X(H_2O)_Y$.

Glucose is a monosaccharide with formula $C_6H_{12}O_6$ .It occurs in Free State in the ripen grapes in bones and also in many sweet fruits. It is also present in human blood to the extent of about 0.1%. Sucrose is one of the most useful disaccharides in our daily life.

It is widely distributed in nature in juices, seeds and also in flowers of many plants. The main source of sucrose is sugar cane juice which contain 15-20 % sucrose and sugar beet which has about 10-17 %sucrose. The molecular formula of sucrose is $C_{12}H_{22}O_{11}$. It is produced by a mixture of glucose and free dose. It is non-reducing in nature whereas glucose is reducing. Cold drinks are a bit acidic in nature and their acidity can be measured by finding their pH value. The pH values also depend upon the acidic contents such as citric acid and phosphoric acid.

Key Words : cold drinks, carbohydrates,monosaccharide,disaccharides.

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 ISBN : 978-93-88443-65-9

NUTRITIONAL EVALUATION OF SOME COMMONLY AVAILABLE LOCAL HERBS IN AHMEDNAGAR ZONE OF MAHARASHTRA

Chetan Kedari N. S. Dighe Hemlata Bhawar Sagar Magar
Department of Pharmaceutical Chemistry
Pravara Rural College of Pharmacy, Loni, Tal. Rahata, Dist. Ahmednagar

ABSTRACT

Present study was done to investigate the various chemical parameters of the Asana, Ashwagandha, Bamboo, Ber, Gliricidia, Jackfruit, Kanchan, Shevari, Shivan and Subabhul leaves. The study will provide referential information for the identification of the nutritive substances of different herbs. These herbs are useful in and as lumbago, hemiplegia, and removal of urinary concretions, liniment with gigelly oil in rheumatism, dysentery and diarrhea, diabetes and for several physiological disorders in animals as well in humans. The chemical analysis of the given herbs was done for the proximate principles viz., Dry matter, Crude protein, Crude fibre, Ether extract, Nitrogen free extract, Total ash and Acid insoluble ash (AOAC, 1995). Results showed that Dry matter, Crude protein, Crude fibre, Ether extract, Nitrogen free extract, Total ash and Acid insoluble ash for Asana (24.38, 12.14, 75.62, 3.98, 41.33, 8.54 and 2.43), Ashwagandha (64.76, 2.14, 2.17, 7.46, 81.54, 6.70 and 1.56), Bamboo (39.42, 12.94, 2.06, 18.34, 48.03, 13.49 and 4.59), Ber (40.18, 10.87, 3.16, 18.44, 57.21, 10.32 and 3.86), Gliricidia (32.48, 20.84, 4.16, 16.54, 44.24, 13.90 and 4.96), Jackfruit (29.75, 13.08, 2.69, 17.54, 56.82, 9.87 and 2.64), Kanchan (39.66, 14.18, 3.40, 17.66, 45.91, 12.72 and 4.18), Shevari (28.96, 18.57, 3.06, 28.91, 43.12, 6.34 and 2.54), Shivan (49.67, 14.19, 2.82, 24.32, 44.90, 3.57 and 1.38) and Subabhul (40.62, 22.72, 3.14, 49.39, 14.93 and 5.88), respectively. The present investigation conclude that the herbs serves supplement for the nutritional requirement of the animals.

Keywords: Herbs, Proximate composition, crude protein, fibre, and nutrient content.

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Current Topics in Computer Aided Drug Design ISBN: 978-93-88441-70-4

SIMULTANEOUS ESTIMATION AND VALIDATION OF MECLIZINE HYDROCLORIDE AND CAFFINE IN BULK AND TABLET DOSAGE FORM BY PRHPLC

Hemlata S. Bhawar* & Siddhart D. Nirhali
Email: dimpals@rediffmail.com
Department of Pharmaceutical Chemistry, Pravara Rural College of Pharmacy, Pravaranagar, Loni, Ahmednagar

ABSTRACT:

A simple, accurate, precise and reproducible Reverse Phase High Performance Liquid Chromatography method was developed and validated for simultaneous estimation of meclizine hydrocloride and caffine in tablet dosage form. Chromatographic separation was achieved by Grace C18 (250 mm x 4.6 ID, Particle size- 5 micron) column and methanol: water (80:20v/v) at pH3 adjusted with ortho phospharic acid as mobile phase, at a flow rate of 1 ml/min (millilitre per minute) using UV detection at 228 nm. The retention time for meclizine hydrocloride and caffine were obtained as 4.128 min and 5.107 min. respectively. The method has been validted for linearity, accuracy, precision, LOD, and LOQ. Linearity of meclizine hydrocloride and caffine were found to be 5 – 25µg/ml. and 4 -20 µg/ml.(R2=0.9991 and 0.9992) respectively. The accuracy of present method was evaluated at 50%, 100%, 150%. Recovery was found to be in a range from 99.95%-101.25% for meclizine hydrocloride and 99.50%-101.80% for caffine .Mean recovery was found 99.36% and 99.71% for meclizine hydrocloride and caffine. Intermediate precision and repeatability studies were carried out and the RSD values were less than 2%. % RSD for repeatability was 0.27% and 0.33%, for intermediate precision 0.24% and 0. 30% and for robustness, 0.54% and 0.51% by change in pH. Lower values of obtained for LOD (0.18) and LOQ (0.06) for meclizine hydrocloride and LOD (0.24) and LOQ (0.18) for caffine respectively. This indicated good sensitivity of the method. In this study, the optimization of mobile phase, flow rate, injection volume and wavelength were achieved. This demonstrates that the developed method is simple, precise, accurate and robust for simultaneous estimation of for meclizine hydrocloride and caffine in tablet dosage form.

Keywords: Meclizine Hydrocloride, Caffine, RP-HPLC, Validation

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This is to certify that Prof./Dr. ~~Mr./Ms.~~ Santosh B. Dighe
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participated in "2nd International Conference on Fostering Interdisciplinary Research in Health Sciences" Jointly organized by Confnext India and AIMST University, Sungai Petani, Kedah Malaysia on 14th-15th, September 2019. He/She has given ~~Poster~~/ Oral Presentation on the topic E-Pharmacare: an initiative for digitalization in Community Pharmacy to maintain health record.

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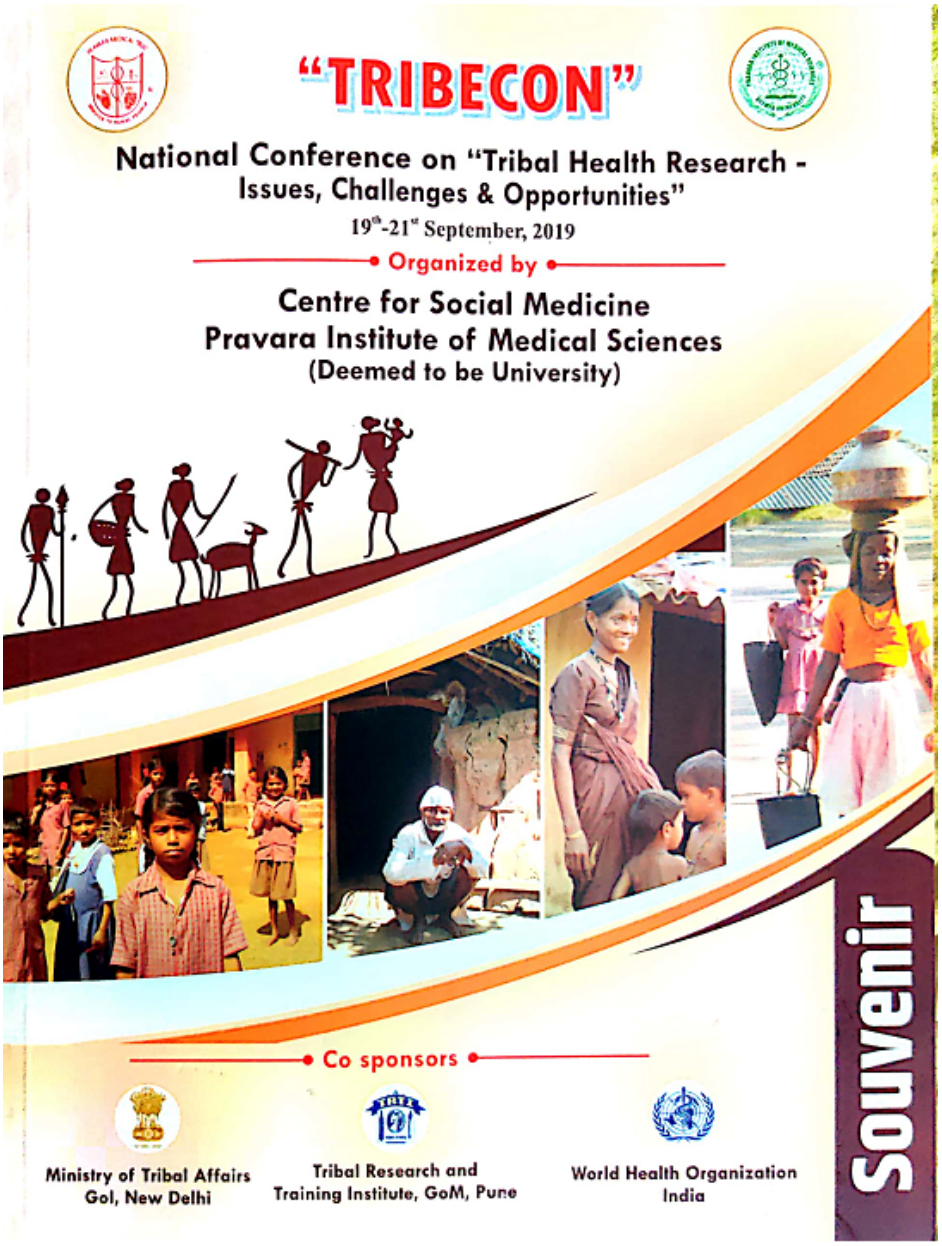

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Theme : Tribal Health - Traditional and Ethno Medicine		
35.	K.S. Pradeep Kumar	Traditional health care practices of the Scheduled Tribe communities: A critical appraisal in the context of the Mannan community of Idukki District in Kerala
36.	A.S. Wabale	Ethnomedicinal plants with Immunostimulant Properties
37.	Sunayana Rahul Vikhe	Indian Tribal Herbs for Diabetes
Theme : Tribal Health Care - Policies & Systems, Implementation, Introduction, Human Resource, Financing		
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INDIAN TRIBAL HERBS FOR DIABETES

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ABSTRACT

Introduction: This article focuses on Indian Tribal Herbal drugs and plants used in the treatment of diabetes. Diabetes is an important human ailment afflicting many from various walks of life in different countries. Diabetes is also considered the most common endocrine disorder. In modern medicine no satisfactory effective therapy is still available to cure diabetes. There is increasing demand by patients to use natural products with antidiabetic activity due to side effects associated with the use of insulin and oral hypoglycemic agents.

Method: A list of medicinal plants with proven antidiabetic and related beneficial effects and of herbal drugs used in treatment of diabetes is compiled. These include, Annona squamosal, Boerhaviadiffusa, Caesalpiniabonducella, Emblica officinalis, Feronia elephantum, Striga orobanchioides, Gymnemasylvestre, Swertiachirayita, Withaniasomnifera and Vincarosea. One of the etiologic factors implicated in the development of diabetes and its complications is the damage induced by free radicals and hence an antidiabetic compound with antioxidant properties would be more beneficial. Therefore information on antioxidant effects of these medicinal plants is also included.

Result: Plant species used by the tribes are mentioned in table 1 with their botanical name, common name and uses. Asterisk mark indicates plant species recorded for the first time. These species were deeply studied for their further use and literature was carried out on the same plants.

Discussion: To prove efficacy of any crude drug, it is very essential to standardize the dosage or administration and also authenticate the sourcing plant species of the drug.

Conclusion: The flora of Maharashtra is very rich and provides very good source of many medicinal plants used as traditional medicine.

Keywords: *Medicinal plant, India, antidiabetic, antioxidant, diabetes*

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O-TNF17

GASTRO RETENTIVE FLOATING TABLET OF *AZADIRACHTA INDICA* (MELIACEAE) FOR THE TREATMENT OF GASTRIC ULCER

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Objective: Plant extract is having good anti-ulcer potential. The present study attempts to develop, optimize and standardize floating tablet of *A. indica* extract for the treatment of gastric ulcer.

Methods: The methods used were Stability Studies, Mathematical Modeling and Release Kinetics, Fingerprint Analysis, Anti-Ulcer Activity in rats, Calculation of Gastric Acidity and X- Ray Studies in Healthy Rabbit. Initially *Azadirachtaindica* leaf extract was finalized by characterization through Ultra Violet spectroscopy, Fourier Transfer –Infra Red spectroscopy and Differential scanning calorimetry. Polymers Psyllium husk and HPMC K100M were selected to retard the release of other agents that is release retarding polymers, gas forming agent was sodium bicarbonate.

Results: Formulation A5 indicated consistent floating characteristics and sustained release up to 18 hrs. Model fitting showed formulation A5 follows Korsmeyerpeppas model. According to the results of Histopathology, efficiency of floating tablet formulation in gastric ulcer regression can be concluded. Thus, results of the study stated that the A5 formulation possesses antigastric ulcer activity as compared to other formulation. Formulation A5 showed mean gastric retention period of more than 8 hours after in-vivo X-ray imaging in rabbit. Results of stability studies showed formulations are physically and chemically stable.

Discussion &Conclusions: The floating tablet prepared from *A. indica* is having good anti-ulcer activity and good floating property.

O-TNF18

SYSTEMATIC OPTIMIZATION OF JANUS EMULSION LOADED WITH FENUGREEK

Priya

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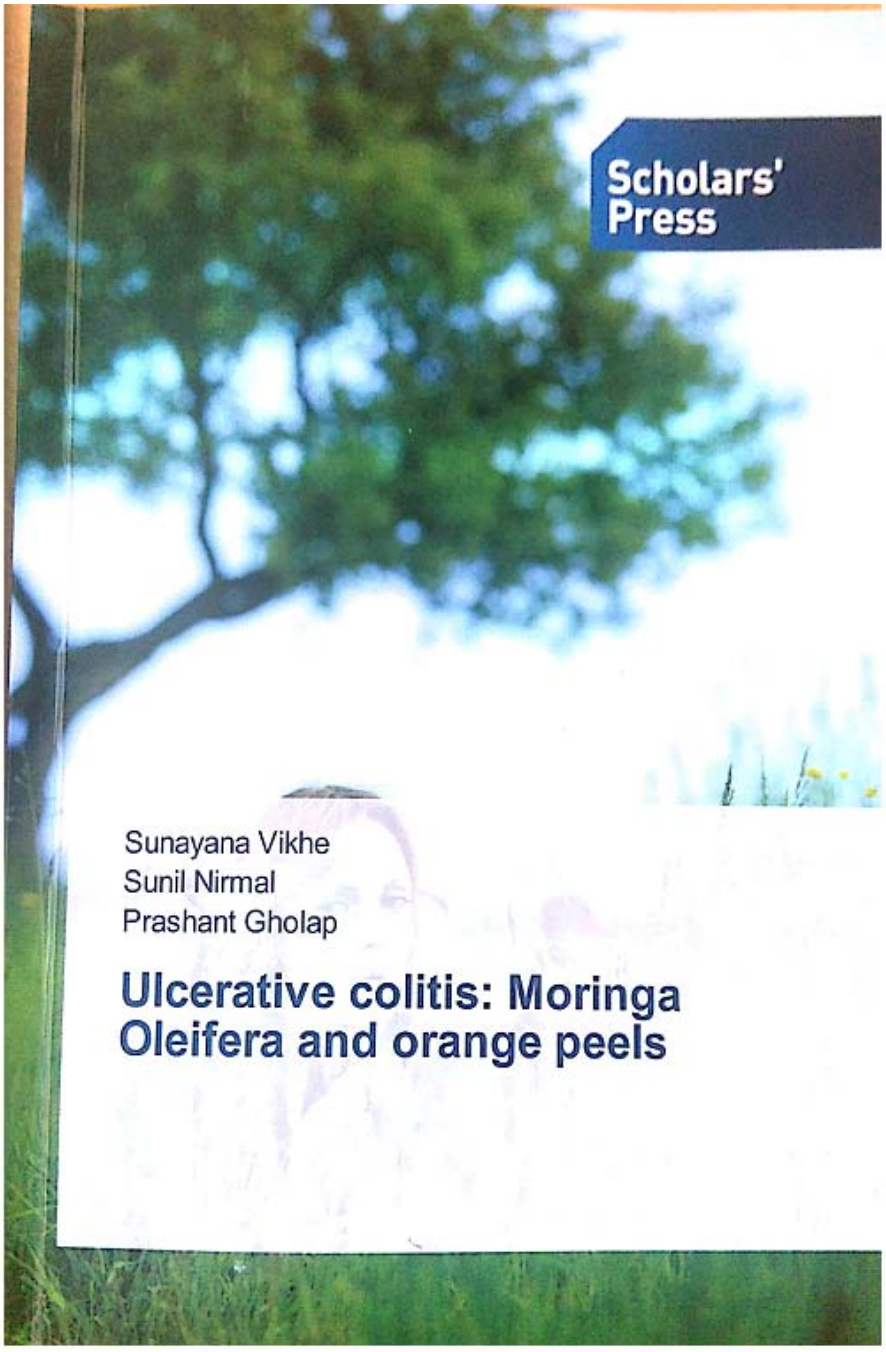
MS. SUNAYANA VIKHE



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"POTENTIAL OF MIXTURE OF MORINGA OLEIFERA AND ORANGE PEEL IN THE TREATMENT OF ULCERATIVE COLITIS"

SUNAYANA VIKHE

SUNIL NIRMAL

PRASHANT GHOLAP

Principal
Pravara Rural College of Pharmacy
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Ulcerative colitis: Moringa Oleifera and orange peels

"Herbs for Ulcer: Safe and Effective" Potential of Moringa oleifera and Orange peels extract in the treatment of Ulcerative colitis. Ulcerative colitis (UC) is a subcategory of inflammatory bowel disease. The term inflammatory bowel disease refers to a large group of disorders that affect the gastrointestinal system. Inflammation is a process that occurs when the body's immune system begins to fight off foreign invaders, such as viruses, bacteria, and fungi. The immune system is a network of organs, tissues, cells, and chemicals designed to kill invading organisms. Some of the chemicals produced by the immune system irritate the body's own tissues. They cause heat, redness, swelling, and loss of function. These changes are all characteristic of inflamed tissue inflammatory bowel disease (IBD) conventionally is divided into two major subtypes: ulcerative colitis and Crohn's disease. Present book gives the use of Moringa oleifera and Orange peels extract in the treatment of Ulcerative colitis.

Prof. SUNAYANA RAHUL VIKHE; M. Pharm. (Pharmacognosy) Assistant Professor, Department of Pharmacognosy, Pravara Rural College Of Pharmacy A/P- Loni, Tal- Rahata, Dist-Ahmednagar, Pin-413736, Maharashtra.

978-3-639-51238-0

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PC 11

SYNTHESIS AND ANALYSIS OF SOME SUBSTITUTED NEW PYRAZOLINE DERIVATIVES OF BIOLOGICAL INTEREST" Research

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ABSTRACT
The synthesis, structure and biological activity of Pyrazoline derivatives have long been the focus of research interests in theof Medicinal Chemistry. A number of Pyrazoline derivatives are reported to possess fascinating biological activities like Antimicrobial, and Anti-tubercular etc. In the present proposal, substituted Benzaldehyde was made to react with various Aromatic substituted ketones to yield different Chalcones. Chalcones so prepared were further allowed to react with Hydrazine Hydrate in the presence of Ethanol and Glacial acetic acid to get Pyrazoline derivatives, further Mannich reaction was carried out to give Mannich base (A1 - A16) all synthesized compound were characterized by IR, H¬1-NMR and CHN Analysis.

All the compounds were evaluated for bactericide at the concentration of two hundred µcg/ml. by victimisationcup-plate agar diffusion methodology. The activity was allotted on completely different micro-organisms (E.coli, S.aureu,) measured in terms of zone of inhibition and compared the standard drug Ciprofloxacin. The Antitubercular screening was allotted by Middle brook 7H9 agar medium against H37Rv Strain. Middle brook 7H9 agar medium victimization antibiotic as a regular. The Pyrazoline have shown considerable activity at high concentrations. These compounds with the acceptable molecular modification could prove as a drug of selection within the treatment of microbic communicable disease in future.
KEYWORDS: Pyrazoline, Anti-tubercular and Antimicrobial activity

PC 12

SYNTHESIS AND EVALUATION OF CYCLIC PEPTIDE AGAINST HUMAN TUMOR CELL LINES

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Synthesis of a natural cyclic pentapeptide cyclo (Gly-Pro-Phe-Val-Phe-) was carried out with good yield by using solution phase technique. The synthesized compound was confirmed by physicochemical and spectral methods of analysis.
The synthesized compound was then evaluated for anticancer activity preliminary by brine shrimp assay and then against a panel of 60 human tumor cell lines. The compound was found to be active by brine shrimp assay with LC_{50} < 90 and had shown good activity against specific cell lines of renal cancer, ovarian cancer, Non-small cell lung cancer and Leukemia. Structural modifications of the molecule may lead to development of potent anticancer analog.
Key words: solution phase technique, brine shrimp assay, human tumor cell lines.

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Pravara Rural College of Pharmacy, India

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"Effect of oxalic corniculata extracts on pentobarbital-induced sleeping time in carbon tetrachloride-induced hepatotoxic rats"

at the "Middle East Pharmacy and Pharmaceutical Conference"

held during September 24-25, 2018 in Abu Dhabi, UAE

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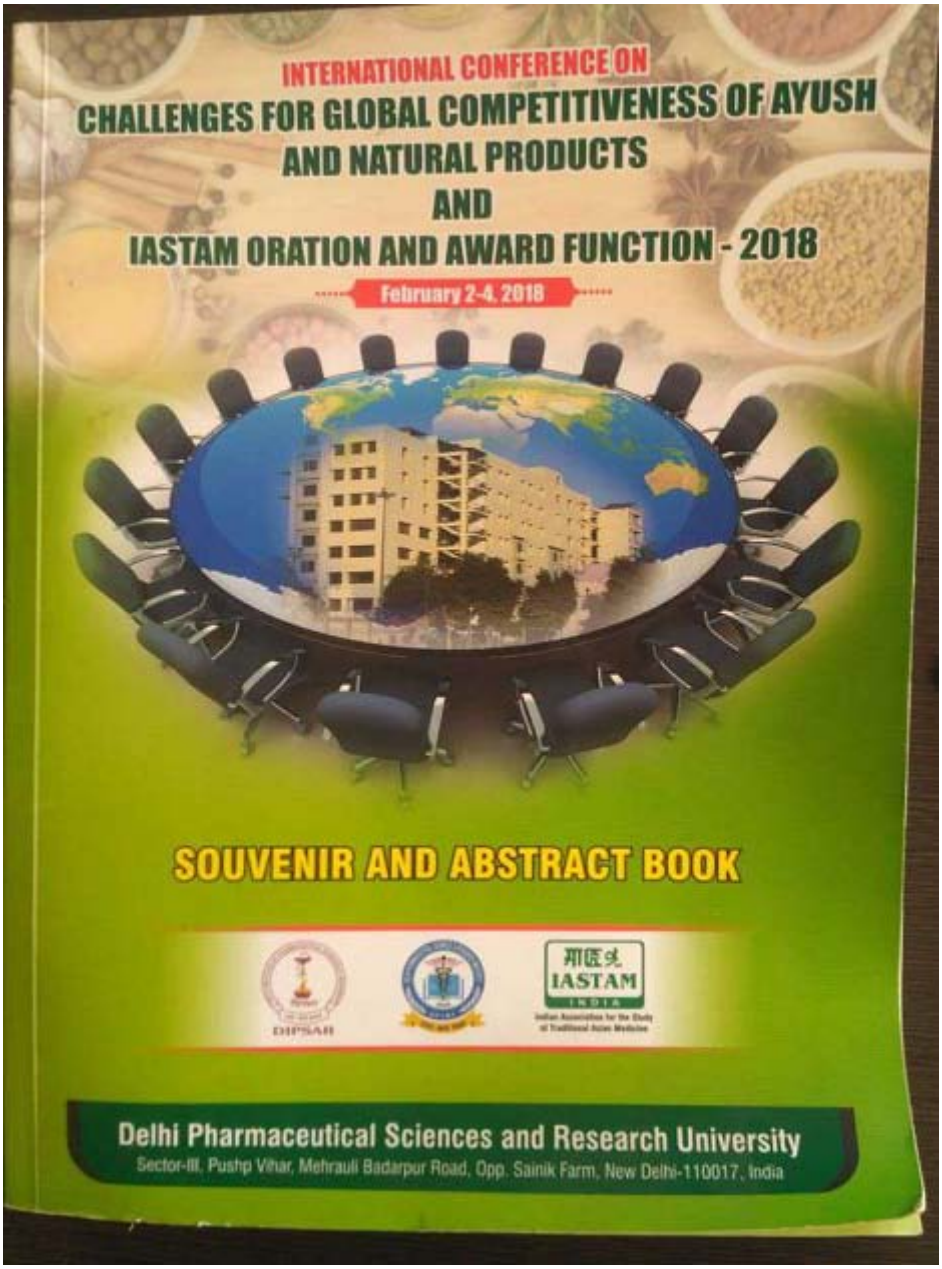
DR. RAVINDRA JADHAV



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new candidates for the treatment of microbes.
Conclusion: In this series 5-methylpyrazine-2-carboxylic acid was used as starting material to synthesize designed compounds structures were established on the basis of IR and ^{1}HNMR data. Compounds 3band 3f have showed excellent antibacterial and antifungal activity against againstPenicilliumcitrinum, Aspergillusniger Staphylococcus aureusand Escherichia coli,. It was interesting and encouraging to note that all the compounds established high-anti bacterial activity than standard drug ofloxacin against Staphylococcus aureus.
The results indicate that the pyrazincontaining oxadiazole derivatives are potential compounds for use in the designing of new candidates for the treatment of microbes.

O-PEH15

PROTECTIVE ROLE OF *LACTUCA SATIVA* LINN. AND ITS FRACTIONS IN SCOPOLAMINE-INDUCED AMNESIA IN MICE

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Objective: Alzheimer's disease (AD) is a progressive neurodegenerative disorder characterized by a gradual decline in cognitive functions. Diet and life style habits plays an important role in controlling/delaying such neurodegenerative disorders. Ample research has proposed that consumption of 'Mediterranean diet' significantly reduces or delays the risk of developing AD. Lactuca sativa Linn. (Asteraceae), commonly known as 'lettuce', is an important part of Mediterranean diet. Traditionally, the plant has been used to improve memory in old people, and its alcoholic extract has also exhibited neuroprotective effects in in vitro studies. In the present study, the plant and its various fractions has been evaluated for its efficacy against scopolamine-induced memory-impairment in mice and also uphold its traditional use as a memory enhancer.
Methods: The standardized alcoholic extract of L. sativa (LSAE) at 50, 100 and 200 mg/kg, p.o. and its fractions (petroleum ether, ethyl acetate, n-butanol and aqueous) at different doses were evaluated against scopolamineinduced amnesia in mice. The effect on memory was assessed using elevated plus maze, novel object recognition and Morris water maze tests followed by biochemical estimations (acetylcholinestearse, malondialdehyde, nitrite, superoxide dismutase, reduced glutathione and catalase levels).
Results: LSAE (200 mg/kg) and its n-butanol fraction (15 mg/kg) exhibited maximum reversal of scopolamine induced behavioral and biochemical alterations.
Discussion & Conclusions: These findings validate the traditional claims of memory enhancing activity of L. sativa, and also suggest that the activity is mediated via its antioxidant and acetylcholinesterase inhibitory action.

O-PEH16

EVALAUATION OF ANTIASTHMATIC POTENCY OF *FERONIA ELEPHANTUM* BARK LINN

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Objective: The asthma is disease of respiratory tract, average 180000 deaths occur annually according to survey of W.H.O. The objective of present study is to evaluate antiasthmatic potential of Feronia elephantumbark.
Methods: The bark of Feronia elephantum was collected and identified from college of agriculture biotechnology loni. The dried powder of Feronia elephantumbark was subjected to extraction by using petroleum ether, Ethyl acetate, methanol and ethanol as a solvent in soxhlet apparatus. The chemical test was performed for various extract to detect primary and secondary metaobolites. The extracts were screened for antiasthmatic activity by Milk Induced Leukocytosis in Mice, Milk Induced Eosinophilia in Mice, and Effect of Histamine on Isolated guinea pig ileum models
Results: The antiasthmatic activity was evaluated by various models in mice, the mice is pretreated with milk by i.c.route. The Leukocytosis and eosinophil count is measured, the results shows that there is increase in count. Extract of *F.elephontum* was given after 24 Hr. by i.p.route. After extract treatment there was decrease in count. In isolated guinea pig model bark extract exhibited a dose-dependent inhibition of contractions of the guinea pig ileum induced by histamine. Petroleum ether extract shows significant activity as compare to other extracts of F. elephantum bark
Discussion: The present study was aimed to evaluate antiasthmatic potential of bark of *F.elephontum* Petroleum ether extract of F. elephantumhas shows significant activity as compare to other extract and standard drug
Conclusion: Antiasthmatic activity of Feronia elephantum bark was performed by various models. The petroleum ether extract shows significant activity as compared to other extracts. All these findings reveal the antiasthmatic activity of petroleum ether extract of Feronia elephantum bark may be due to the presence of rich contents flavonoids and phenolic constituents

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Green Chemistry- Role in Environmental Protection ISBN : 978-93-87665-40-8

FORMULATION OF HERBAL ANALGESIC AND ANTI-INFLAMMATORY OINTMENT FROM *FICUS GLOMERATA* LEAVES

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Abstract

Ficus glomerata plant belonging to family moraceae. The leaves was collected from chinchpur and authenticated by botanical survey of India (pune) . The hight of plant is 10 to 16 meters, the plant report various phytoconstituents glycosides, glucanol acetate, B-amyrin, B-sitosterol.

Analgesic and anti-inflammatory activities of petroleum ether and alcoholic extract of ficus glomerata leaves at dose of 50 mg/kg ;100mg/kg body weight will evaluate against standard drug –pentrazocin lactate a dose of 10mg/kg body weight .A dult swiss albino mice of either sex of six numbers in each group ,was undertaken for study and evaluate by Eddys hot plate method and tail immersion test for analgesic activity. Albino rats of wistar strain of either sex of six number in each group ,will undertaken for study and evaluate by using carrageenan Rat Paw Edema for anti- inflammatory activity.

Key words : Ficus glomerata , , B-amyrin , petroleum ether , anti-inflammatory activity

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Green Chemistry- Role in Environmental Protection ISBN : 978-93-87665-40-8

DEVELOPMENT AND EVALUATION OF "GOMUTRA" FORMULATION

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Abstract

Cow the domestic animal. Which is developed as god and its said that 33corer god To be existing in cow.

The cow urine has been used form ancient time for curing ailments of human beings. It is importance and essential part of Panchgavya Chikitsa. Different Ayurvedic literature have mentioned its importance and uses for treatment of kushtha, kandu, Udarrog, colic, Abdominal tumour, Enlargement of the abdomen and Flatulence, for therapies such as decoction purgation, enema etc.

Many researches have also be done, which shows its use for treatment of skin diseases, Stomach diseases, Kidney diseases, Heart diseases, Stones, Diabetes, Liver problem, Jaundice, Athletes feet, cyst, Hemorrhoid etc. and show its Immunostimulant, Bioenhencer, Anticonvulsant, Anti cancerous Wound healing, Antioxidant and Antimicrobial properties. It is also useful in agriculture for preparation of vermicompost and biopesticides. This review article will also collect the data from different Ayurvedic and modern literature. The article will also collect the data from all researches done on cow urine. Cow urine is excellent bioenhencer and recently cow urine distillate has been granted U.S patents. Public awareness is required to promote the importance and wide application of urine to importance their health and lifestyle.

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MARTYNIA ANNUA LEAVES EXTRACT: PHARMACOGNOSTIC, PHYTOCHEMICAL AND PHARMACOLOGICAL STUDY- POSSIBLE ROLE IN INFLAMMATION AND ANALGESIA.

Vikhe S.R[1*], Nirmal S.A[1], Jadhav R.S[1], Bansode S.S, Wagh Vaishnavi, Thorat Nikita.

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Abstract

Plant *Martynia annua* Linn. (Martyniaceae) is known as Tiger claw, Devils claw in English and Bichu in Hindi and Vinchu in Marathi. Earlier claims show that the plant is used in epilepsy, inflammation, tuberculosis, antiepileptic, antiseptic, analgesic, gargle for sore throat, the leaf paste for wounds. The leaves has been claimed to contain steroid, carbohydrate, tannins, flavonoid, glycoside, proteins, saponin etc. The plant extracts using preliminary test. Methanolic extract of the leaves showed the presence of alkaloids, tannins, glycosides, steroids, proteins, carbohydrates, and flavonoid. The present study was carried out analgesic activity using hot plate method and hot water tail-immersion tests in mice and anti-inflammatory activity using by Carrageenan induced paw edema method in rats. The Petroleum ether extracts, chloroform extracts and methanolic extracts (50, 100 and 200 mg/kg, p.o.) showed an analgesic and anti-inflammatory effect, which was significantly higher than that in the control mice. ANOVA using Dunnett's multiple comparison tests

The observed pharmacological activities provide the scientific basis to support traditional claims as well as explore some new and promising leads.

Keywords: *Martynia annua*, extract, Pharmacognosy, Phytochemistry, Pharmacology, Analgesic, Anti-inflammatory, mice, ANOVA.

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D9 Formulation & Development of Herbal Tablet From Ficusbengalensis for Assessment of Antidiabetic Activity

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Abstract

The Ficus bengalensis is plant from family moracae. The plant is about 30m in height. The plant reports various phyto constituents like furocoumarin, flavonoids, and esters. According to Ayurveda, the plant is astringent to bowels and useful in treatment of biliousness, ulcers, vomiting, vaginal complains, fever, inflammations and leprosy. According to Unani system of medicine, the latex is aphrodisiac, tonic and useful in piles, nose-diseases and gonorrhea. The aerial root is use in syphilis, biliousness, dysentery and inflammation of liver. It is used in treatment of tooth ache, tooth picks, diabetes.

The leaves of ficus bengalensis collected from Loni, the plant is authenticated from M.P.K.V.Rhauri. The specimen is deposited in department, the leaves are shed dried and subjected for powder preparation. The powder is extracted with petroleum ether and methanol as solvent by using soxhlet apparatus.The leaves of ficus bengalensis was study for morphological and microscopical parameters. The extract obtain from petroleum ether and methanol was used fordetection of various primary and secondary metabolites. The extract shows presence of steroids, saponins, glycosides and tannins.

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 ISBN : 978-93-88441-65-0

A PHARMACOGNOSTIC STUDY ON ECLIPTA ALBA

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ABSTRACT
Eclipta alba commonly known as 'Bhringraj'. Family Asteraceae. *Eclipta alba* is a tree species found in Maharashtra, native to india and Sri. Lanka. Root well developed, cylindrical, greyish. Eclipta alba is an Annual plant growing to 0.6m by 0.6m. The Roots was studied for morphological as well as microscopical characteristics. The roots was also evaluated for different physical constant like ash value, moisture content and foreign matter. The transverse section of *Eclipta alba* roots was taken and these sections were stain with phloroglucinol and HCL. Sudan red III, Acetic acid, Dil. Iodine solution. The microscopical study reports shows the presence of xylem, phloem, medullary rays, starch grains and calcium oxalate crystals. These histological characteristics present in the plant shows that the plant contains primary and secondary metabolites which having role in different diseases.

Keyword :- Eclipta alba, microscopy, ash value, moisture content and foreign matter.

HERBAL NUTRACEUTICALS IN TREATMENT, PREVENTION OF CVS DISEASES

Priya

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 ISBN : 978-93-8841-434

A PHARMACOGNOSTIC STUDY ON MITRAGYNA PARVIFOLIA (ROXB.) KORTH

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ABSTRACT

Mitragyna parvifolia commonly known as Kaim, Kalam, Kaddam. Family Rubiaceae. *Mitragynaparvifolia* is a tree species found in Maharashtra, native to india and Sri. Lanka. The plant reaches height 50 feet with a branch spread over 15 feet. The stem bark was studied for morphological as well as microscopical characteristics. The bark was also evaluated for different physical constant like ash value, moisture content and foreign matter. The transverse section of *Mitragynaparvifolia* stem bark was taken and these sections were stain with phloroglucinol and HCL, Sudan red III, Acetic acid, Dil. Iodine solution. The microscopical study reports shows the presence of xylem, phloem, medullary rays, starch grains and calcium oxalate crystals. These histological characteristics present in the plant shows that the plant contains primary and secondary metabolites which having role in different diseases.

Keyword :- Mitragyna parvifolia , ash value, moisture content and foreign matter.

IDENTIFIC...

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IDENTIFICATION OF IMPORTANT SECONDARY METABOLITES FROM BAUHINIA RACEMOSA LINN

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Department of Pharmacognosy.

The Present study reports important secondary metabolites present in *Bauhinia Racemosa Linn*. The *Bauhinia Racemosa Linn* belong to the family Luguminosae , it is populary known as 'Aapta' in Marathi, Kanchnal in Hindi other common name include mountain abony and kachnar (India & Pakistan) The leaves are known to cure skin disease, throat troubles tumours chronic, dysentery, headache, malaria. The powdered Leaves was subjected for extraction by using petroleum ether chloroform, ethanol. These extract were evaluated for detection of various secondary metabolites, like Glycosides, Tannins, Terpenoides, Alkaloids. The preliminary phytochemical screening were done using various chemical test. The study show presences of Alkaloids, Tannins. These secondary metabolites having role in chronic disease as well as they act as source of nutrient.

Keywords- Bauhinia racemosa linn, Petroleum ether, Ethanol etc.

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 ISBN : 978-93-88441-65-0

FORMULATION AND DEVELOPMENT OF POLYHERBAL GRANULES AND ITS NUTRITIONAL CHARACTERIZATION

Miss Prachi Dighe Dr. R. S. Jadhav Prof. T. D. Dukre Dr. P. R. Rao

ABSTRACT:

The aim of the present study was to formulate and evaluate the pharmaceutical quality of polyherbal granules. Polyherbal formulation was prepared using hydroalcoholic extracts of Curcuma longa, Tinospora cordifolia, Withania somnifera to obtain the best formulation; in order to increase the acceptability and adoptability of herbal medicine. The objective of this research work was the conversion of extracted powder into stable, palatable and patient accepatable granules to swallow conviently by using granulation method, using suitabnle binding agents. The granules formulations will be optimised on the basis of acceptable flow properties of granules.The properties of developed herbal granule will be compared with corresponding marketed product. Developed granules will be tested for organoleptic evaluation.

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 ISBN : 978-93-88441-63-4

A STUDY ON PHYTOCHEMICAL STUDY OF AZADIRACTA INDICA BARK

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Dist - Ahmednagar, Maharashtra

ABSTRACT

Azadiracta indica A. Juss (Meliaceae) commonly known as Neem, is found throughout India and is known to have many wonderous properties from ancient times. These *A. indica* shows different medicinal properties like antiulcerogenic, hypoglycemic, insecticidal, spermicidal actions. The stem bark was studied for morphological as well as microscopical characteristics. The stem bark was evaluated for different physical constant like ash value, moisture content and foreign matter. The transeverse section of *Azadiracta indica* stem bark was taken and these section were stain with Phloroglucinol and HCL, sudan red III, dil.iodine solution. The microscopical study report shows the presence of xylem, phloem, medullary rays, starch grains and calcium oxalate crystals. These histological characteristics present in the plant shows that the plant contain primary and secondary metabolites which having role in different diseases.

Keywords: Azadiracta indica, xylem, medullary rays, starch grains, phloem.

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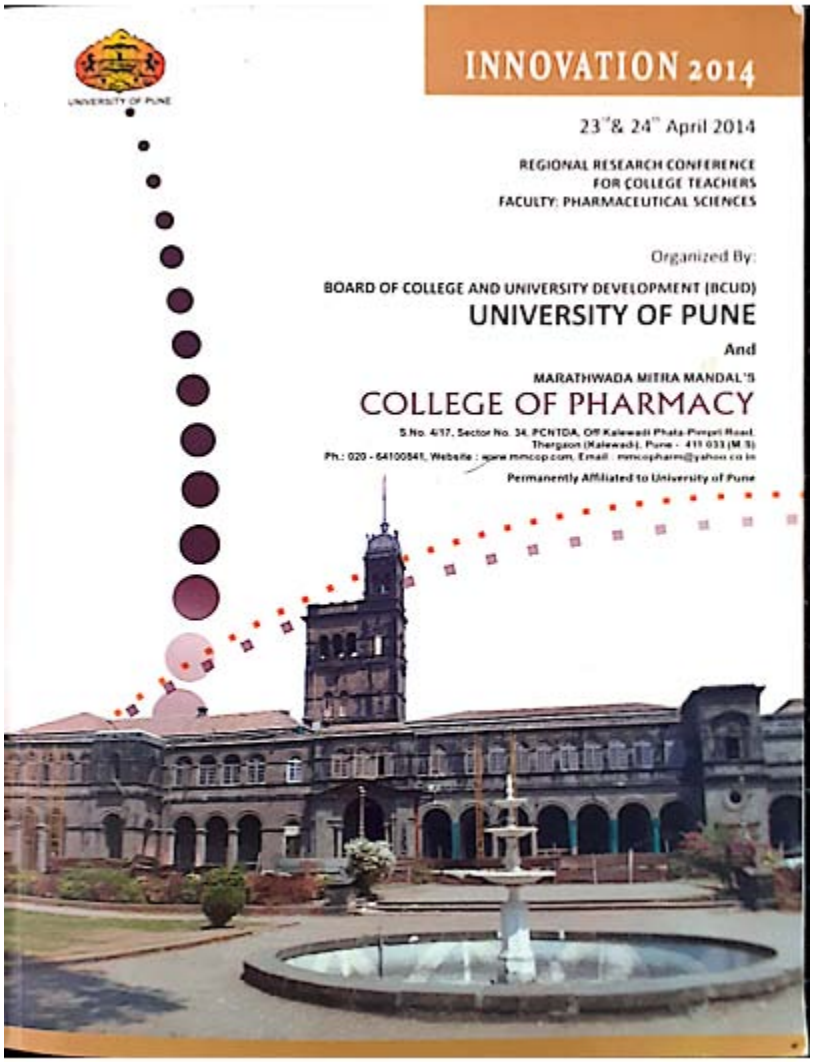

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D 12:

Antiasthmatic potency of *feronia Elephantum* bark

Jadhav Ravindra Sahadu
Department of Pharmacognosy Pravara Rural College of Pharmacy Pravaranagar
A/P –Loni, Tal-Rahata, Dist-Ahmednagar (M.S.) 413736

Abstract:

Feronia elephantum correa (rutaceae) have been used in the treatment of asthma traditionally and I therefore undertook this study to scientifically validate its benefit in asthma using various extracts and suitable animal models. *Feronia elephantum* is also called as feronia limonia, root bark contain chemical constituents bergapten, 6-methoxy-7-tetrahydroxycoumarin and marmesin. The present work was undertaken to evaluate the traditionally recognized antiasthmatic potency of feronia Elephantum bark. antihistaminic principle are known to be useful in the treatment of asthma, hence in present work, various extracts of feronia Elephantum bark were assed using clonidine induced catalepsy and haloperidol induced catalepsy in Swiss albino mice. Ethanol extract (50 mg/kg, i.p.) of the plant significantly inhibited clonidine induced catalepsy. Thus the antihistaminic activity of *feronia elephantum* may be due to polar constituents.

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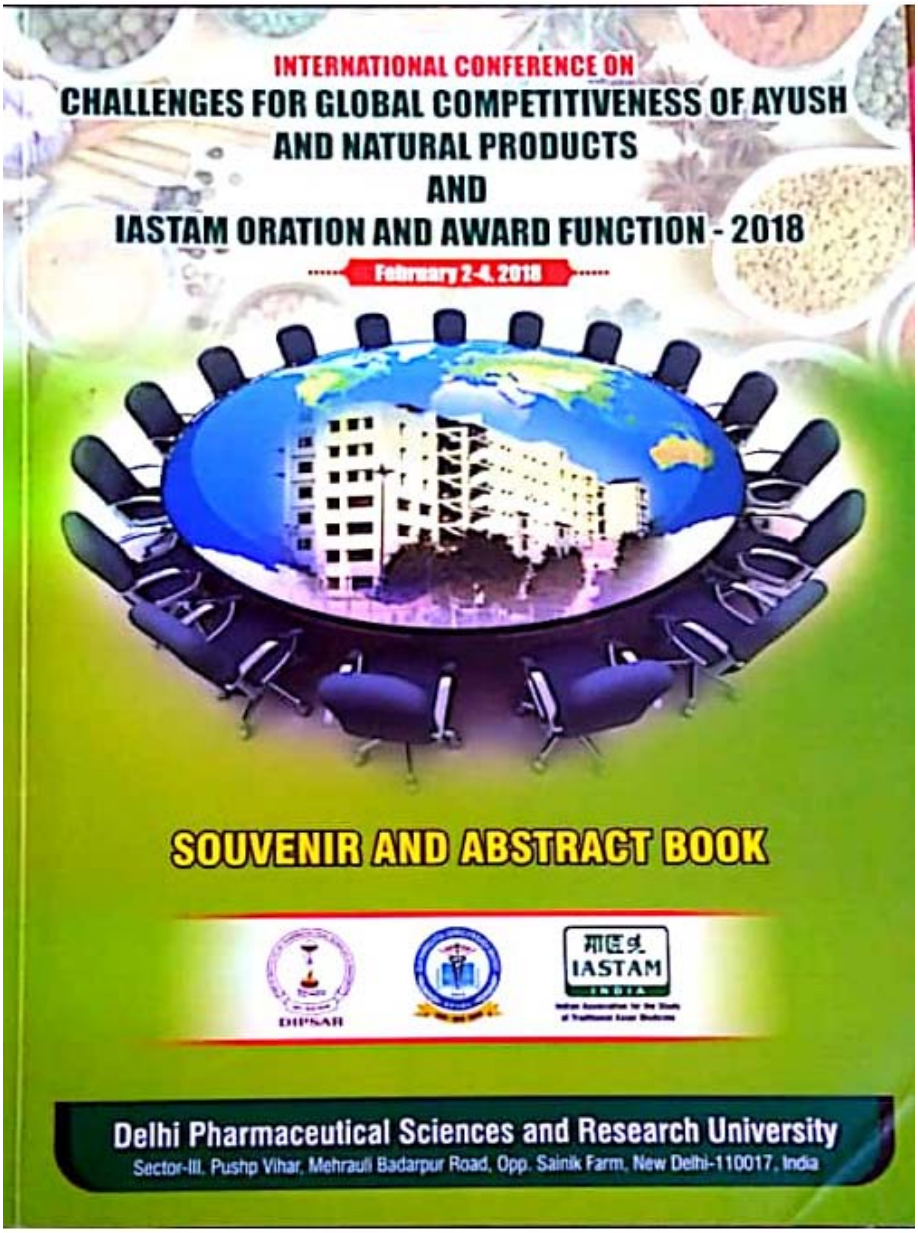
MRS. HEMLATA BHAWAR



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O-PEH9

PHARMACOGNOSTIC, PHYTOCHEMICAL AND PHARMACOLOGICAL EVALUATION OF LEAVES OF *ABRUS PRECATORIUS*

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Objective: The global prevalence of asthma is anticipated to be approximately 4.5 per cent. There are about 334 million patients with asthma affecting all age groups, across the world. The research study involves pharmacognostic, phytochemical and pharmacological evaluation of the leaves of Abrus precatorius for antiasthamatic, anticataleptic, antiallergic activity

Method: Leaves of Abrus precatorius Linn, (Fabaceae) were used for studying pharmacognostical, phytochemical and pharmacological evaluation. For pharmacognostic evaluation microscopic evaluation, determination of physical constant such as Ash value, Extractive values in alcohol soluble extract and water soluble extract were performed as per IP 1996, determination of moisture content were performed as per IP 1996. For preliminary phytochemical studies test for carbohydrate, protein, amino acid, steroids, glycosides, alkaloids, tannins, phenolic compounds and flavonoids were performed. For phytochemical evaluation different extract were prepared using leaves of Abrus precatorius and different solvents like petroleum ether, ethanol and water by using soxhlet extractor. The completion of extraction was confirmed by performing TLC. For pharmacological evaluation of extract male albino mice (Swiss Strain) weighing 22 – 25gm and guinea pig weighing 100 – 120gm are used in group of 6 each. Mice were used for study clonidine and haloperidol induced catalepsy, milk (cows) induced leukocytosis, eosinophilia whereas guinea pig used for antiasthamatic activity.

Result: Total Ash value was greater, water soluble Ash value was found lower than acid insoluble ash value and the result of extractive values shows higher value of polar compounds. Microscopic evaluation shows zones as periderm, secondary phloem, and calcium oxalate crystal and starch grain. In preliminary phytochemical test leaves extract showed presence of steroids, alkaloids, flavonoids. In TLC extract showed effective separation and presence of steroid nucleus, flavonoid and alkaloids. Ethanol extract was found to be effective in clonidine induced catalepsy at the dose 100mg/kg. There was no significant inhibition in haloperidol induced catalepsy with Abrus precatorius leaves extracts, also shows decreasin

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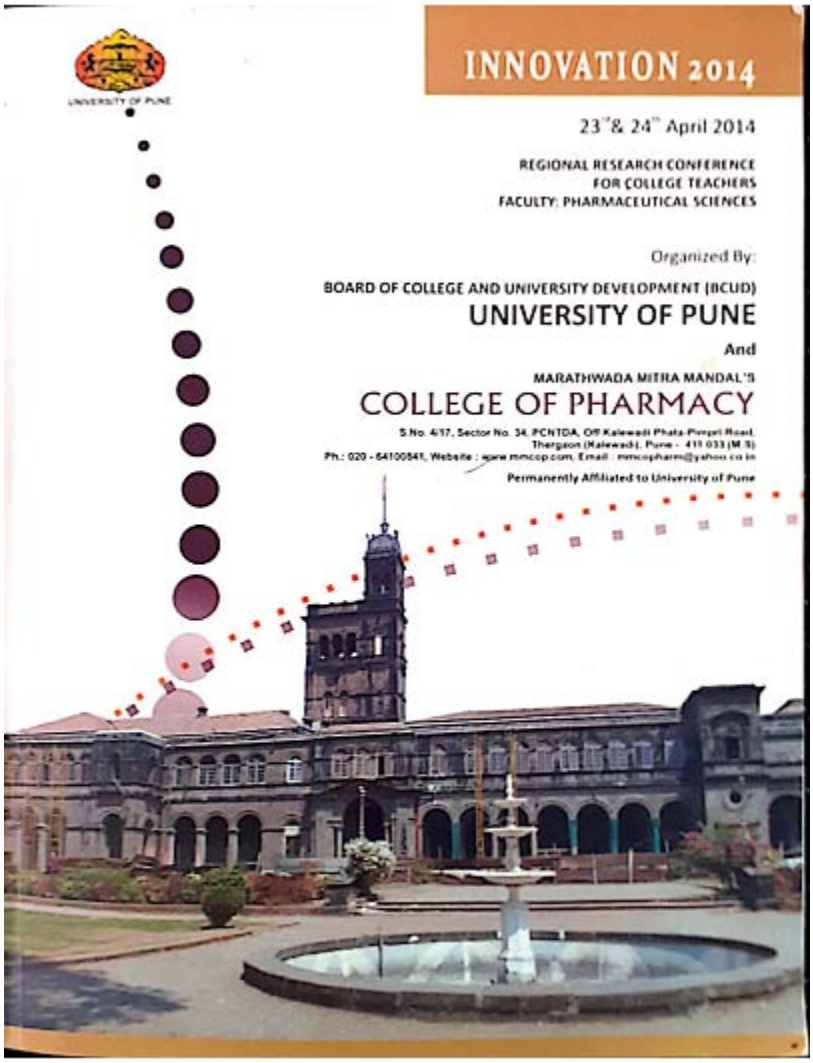

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B 8:

SYNTHESIS AND PHARMACOLOGICAL SCREENING OF SOME SULPHUR AND NITROGEN CONTAINING HETEROCYCLIC COMPOUNDS.

MRs. Hemlata S. Bhawar, Dr. S.R. Pattan. Department of Pharmaceutical Chemistry.
Pravara Rural College of Pharmacy. Pravaranagar A/P. Loni Dist. A.nagar

Abstract

- The present work deals with the method of synthesizing sulphur and nitrogen containing heterocyc substituted thiadiazole and thiazolidinedione and to study Chemical characterization of the newly compound by I.R, NMR spectral data and to evaluate these substituted thiadiazole and thiazolidinedio anti-diabetic, anti-tubercular activity. Total nine derivatives of thiadiazole and five derivatives of thiazol were synthesized and evaluated their anti-diabetic, anti-tubercular activity .Anti-tubercular activity is ca Middle Brook 7H9 agar medium against H $_{37}$Rv strain and in vitro antidiabetic activity was determined by glucosidase enzyme. Some synthesized compounds were shown moderate to promising antitubercular antidiabetic activity.

- Key words : thaidiazole,thiazolidinedione

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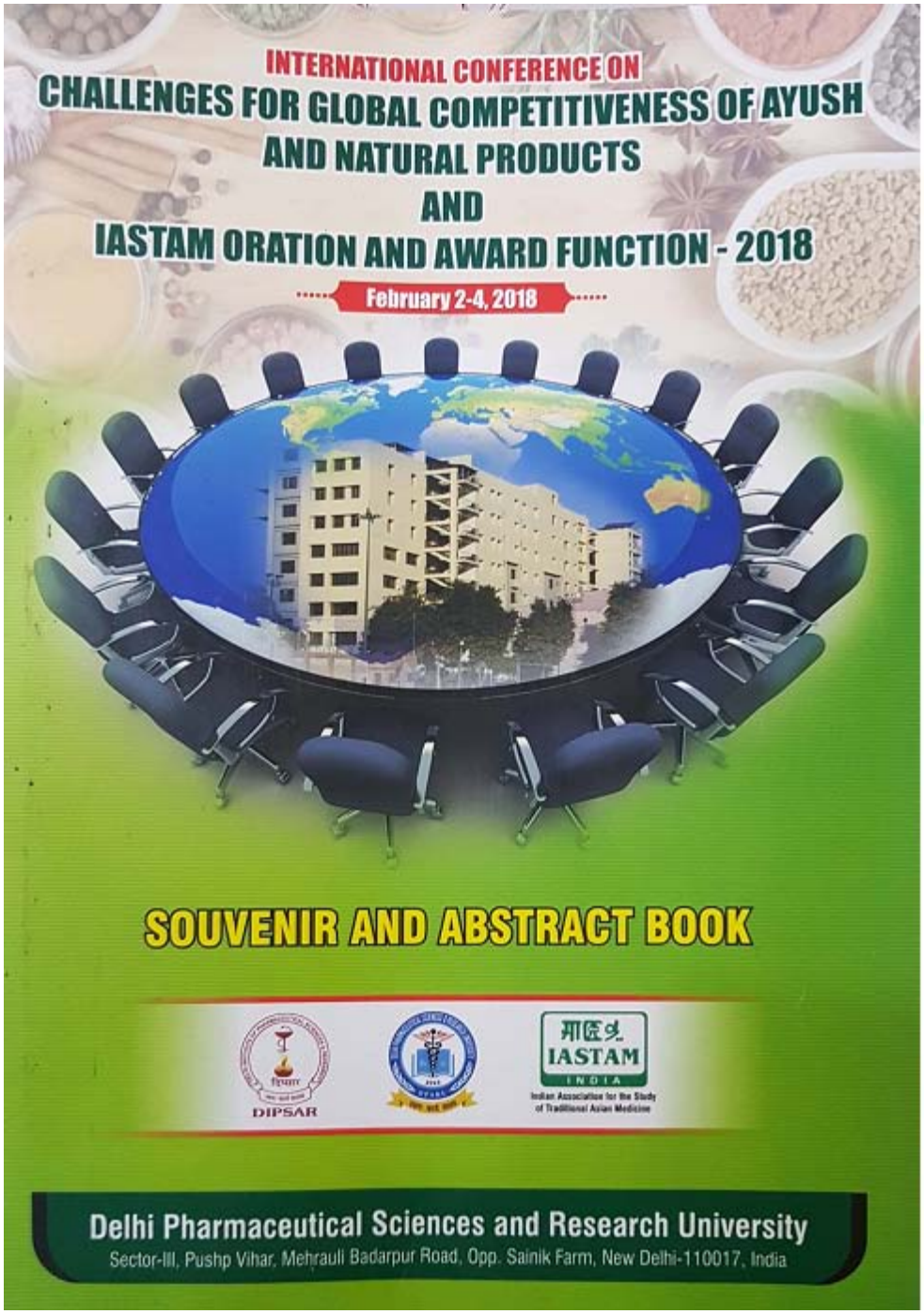

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Conclusions: Considering our results, polyherbal formulation is an antiseptic and antibacterial property that would be a beneficial for humans who suffer from chronic Acne Vulgaris.

O-TNF23

FORMULATIONCHARACTERIZATION AND EVALUATION OF HERBAL OINTMENT FOR WOUND HEALING ACTIVITY

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Objective: Plant extracts are having good application in wound healing. Extracts obtained from plants Solanum nigrum and Argemone mexicana are used for wound healing in folk medicine. The present study attempts to develop and standardise wound healing ointment from extracts of S. nigrum and A. mexicana.
Methods: The effectiveness of product was evaluated using excision wound model, dead space wound model, various enzyme estimations, histopathological study in rats, antimicrobial study, finger print analysis and other physical evaluation of ointments.
Results: Results showed that formulation F4 is most effective amongst other formulations and the wound was completely contracted in 12 days after application of formulation F4 to the wound. Ointment is well stable for a month in accelerated stability studies and HPTLC fingerprint proved incorporation of extracts into finished formulations. Results for extrusion, spreadability, viscosity and pH are within the limits.
Conclusion: It can be concluded that ointment prepared from S. nigrum and A. mexicanais having good wound healing activity and is well stable.

O-TNF24

ANTIOXIDANT AND HEPATOPROTECTIVE ACTIVITY OF UNANI FORMULATION (SAFI) IN WISTAR ALBINO RATS.

Priya

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MARTYNIA ANNUA LEAVES EXTRACT: PHARMACOGNOSTIC, PHYTOCHEMICAL AND PHARMACOLOGICAL STUDY, POSSIBLE ROLE IN INFLAMMATION AND ANALGESIA.

Vibhe S.R[1*], Nirmal SA[1], Jadhav RS[1], Bamode SS, Wagh Vaishnavi, Thorat Nikita.

[1]Department of Pharmacognosy, Pravara Rural College of Pharmacy, Loni, M.S, India.

Abstract

Plant *Martynia annua* Linn. (Martyniaceae) is known as Tiger claw, Devils claw in English and Bichu in Hindi and Vinchu in Marathi. Earlier claims show that the plant is used in epilepsy, inflammation, tuberculosis, antiepileptic, antiseptic, analgesic, gargle for sore throat, the leaf paste for wounds. The leaves has been claimed to contain steroid, carbohydrate, tannins, flavonoid, glycoside, proteins, saponin etc. The plant extracts using preliminary test. Methanolic extract of the leaves showed the presence of alkaloids, tannins, glycosides, steroids, proteins, carbohydrates, and flavonoid. The present study was carried out analgesic activity using hot plate method and hot water tail-immersion tests in mice and anti-inflammatory activity using by Carrageenan induced paw edema method in rats. The Petroleum ether extracts, chloroform extracts and methanolic extracts (50, 100 and 200 mg/kg, p.o.) showed an analgesic and anti-inflammatory effect, which was significantly higher than that in the control mice. ANOVA using Dunnette's multiple comparison tests

The observed pharmacological activities provide the scientific basis to support traditional claims as well as explore some new and promising leads.

Keywords: *Martynia annua*, extract, Pharmacognosy, Phytochemistry, Pharmacology, Analgesic, Anti-inflammatory, mice, ANOVA,

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FORMULATION AND EVALUATION OF POLYHERBAL ANTIDIABETIC TABLET

Nirmal Sunil A[1] ,Vikhe Sunayana R[2] , Tambe Rupali V[3], , Mokate Rajesh D[4].

Department of Pharmacognosy , Pravara Rural College of pharmacy , Loni.[1,2,4]

Department of Quality Assurance And Techniques , Pravara Rural College Of Pharmacy , Loni.[3]

Email :rupalitambe1994@gmail.com

Abstract:

Objectives : The main objective of the work is to formulate and evaluate polyherbal antidiabetic tablet for antidiabetic purpose.

Method: The effect of ethanolic extract of polyherbal preparation containing aerial part of *Momordica indica* (fruits),*Azadirachta indica* (leaves) and *Curcuma longa* (rhizomes) was investigated in normal and streptozotocin induced diabetic rats. Wistar rats were divided into 6 groups (n=6)standard group received the metformin treatment group received the polyherbal extract . Blood glucose level were measure by cutting the tail tip of rat at the interval of 0,5,10,15,20. Formulated tablet was evaluated for dissolution ,disintegration , friability , weight of active constituents and hardness. **Results** :The lowering of blood glucose level were observed after administration of polyherbal formulation . Antidiabetic activity of polyherbal formulation was compaired with the standard drug metformin. Results were analyse statistical significance value $p<0.05$. Polyherbal formulation is effective for antidiabetic activity. **Conclusion**: Polyherbal tablet of *Momordica indica* , *Azadirachta indica* and *Curcuma longa* shows significant antidiabetic activity.

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A STUDY ON PHYTOCHEMICAL STUDY OF AZADIRACTA INDICA BARK

Miss. Gite Dipika U. **Jadhav Ravindra S.** **Vikhe Sunayana R.**
Department of Pharmacognosy
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Dist - Ahmednagar, Maharashtra

ABSTRACT

Azadiracta indica A. Juss (Meliaceae) commonly known as Neem, is found throughout India and is known to have many wonderous properties from ancient times. These *A. indica* shows different medicinal properties like antiulcerogenic, hypoglycemic, insecticidal, spermicidal actions. The stem bark was studied for morphological as well as microscopical characteristics. The stem bark was evaluated for different physical constant like ash value, moisture content and foreign matter. The transeverse section of *Azadiracta indica* stem bark was taken and these section were stain with Phloroglucinol and HCL, sudan red III, dil.iodine solution. The microscopical study report shows the presence of xylem, phloem, medullary rays, starch grains and calcium oxalate crystals. These histological characteristics present in the plant shows that the plant contain primary and secondary metabolites which having role in different diseases.

Keywords: Azadiracta indica, xylem, medullary rays, starch grains, phloem.

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 ISBN : 978-93-87665-40-8

SIGNIFICANCE OF STEREOCHEMISTRY ON BIOLOGICAL ACTIVITY

Magar S. D., Dighe A.S., Barhate Manoj, Kakade Vaibhav.

Pravara Rural College of pharmacy, Loni, Tal- Rahata, Dist- Ahmednagar. (M.S.)

Abstract

The stereochemistry is gaining prime importance in pharmaceutical practice. As a result of advancement in chemical technologies associated with the synthesis, separation, identification and analysis of single enantiomer present in racemic compound, a single enantiomer for approval to regulatory authorities. Rather to introduce a racemic compound, a single enantiomer always have better selectivity on receptor result in superior therapeutic action with less metabolic load and less side effects. The enzymes or amino acids or binding site have long been recognized to be stereoselective which is considered in chiral drug development. Each enantiomer interacts differently with the receptor, elicits the response differently and potency of enantiomer depends on the eudismic ratio or eudismic index or stereospecific index on the compound. Therefore eudismic ratio is also an important tool in chiral drug designing. The issued related to eudismic ratio are presented in this review article and it facilitates us for single enantiomer development.

Keywords: Enatiomers, Eudismic ratio, Stereoselectivity, chiral drug, eutomer, distomer.

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APPLICATION OF NANO CHEMISTRY IN MEDICINE

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Abstract

The use of nanotechnology in medicine offers some exciting possibilities. Some techniques are only imagined, while others are at various stages of testing, or actually being used today. Nanotechnology in medicine involves applications of nanoparticles currently under development, as well as longer range research that involves the use of manufactured nano-robots to make repairs at the cellular level (sometimes referred to as *nanomedicine*). Whatever you call it, the use of nanotechnology in the field of medicine could revolutionize the way we detect and treat damage to the human body and disease in the future, and many techniques only imagined a few years ago are making remarkable progress towards becoming realities.

Keyword: Nanotechnology, graphene, Nano robot, fullerens.

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PC 14

TO STUDY IN-VITRO UROLIATHIASIS ACTIVITY OF DENDROPHTHOE FULCATA

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ABSTRACT

The leaves of plant Dendrophthoe falcata were selected for present study the plant was collected from rural area of Shrirampur.The fresh leaves are dried under sunlight up to 4-5 days. Then powdered with the help of electric grinder and extracted with Alcohol, Pet ether, Water for 24hrs by using Soxhlet apparatus successively with various solvent are removed under reduced pressure. Extract are concentrated to dryness at controlled temp. Dried powder drug are evaluated for amount of drug extracted during process of extraction and % of extraction of drug in various solvent are also calculated. Then preliminary phytochemical sceerining were performed and microscopic and characters were studied compound, microscopic characters also studied. Dried powdered drug contain only Flavonid.Galic acid,Pentacyclic triterpenoid,saponin glycoside. Microscopic study also performed for fresh leaves using Sudan Red and Phloroglicenol:HCl

Keywords: - calcium oxalate, crystallisation, Dendrophthoe falcate, urolithiasis

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TO STUDY THE ANTICANCER POTENTIAL OF PLANT *DYEROPHYTUM INDICUM* LEAVES (PLUMBAGINACEAE)

Dattatraya S.Bhosale, Dattaprasad N. Vikhe*, Tushar P.Dukre,Sunil A. Nirmal

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ABSTRACT

Recent investigation aims to check the anticancer potential of plant dyerophytum indicum. Plants were authenticated; collected, dried and aqueous extract was prepared by using organic solvents like ethanol. The morphological and microscopical characteristics of leaves were studied. The active constituents were separated by using TLC and Column Chromatography. Aqueous extracts of above mentioned Plant were standardized by using GC-MS. The pharmacological screening were done by using in-vitro models such as Onion tip root and potato disc assay method. In preliminary phytochemical test the leaves extract showed presence of carbohydrate, alkaloids, flavonoids, tannins and terpenoids. Fraction F1 and F4 was found to be significantly effective in all the models for anticancer activity. Thus, Results of the study stated that the ethanol extract of Leaves of *D. indicum O. ktze.*, possesses the anticancer activity. n-hexadecanoic acid is anticancer agent responsible for anticancer activity.

Key words: dyerophytum indicum, TLC, GC-MS, anticancer activity, n-hexadecanoic acid.

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 ISBN : 978-93-88441-65-0

A PHARMACOGNOSTIC STUDY ON ECLIPTA ALBA

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Tal : Rahata Dist: Ahmednagar 413736.

ABSTRACT
Eclipta alba commonly known as 'Bhringraj'. Family Asteraceae. *Eclipta alba* is a tree species found in Maharashtra, native to india and Sri. Lanka. Root well developed, cylindrical, greyish. Eclipta alba is an Annual plant growing to 0.6m by 0.6m. The Roots was studied for morphological as well as microscopical characteristics. The roots was also evaluated for different physical constant like ash value, moisture content and foreign matter. The transverse section of *Eclipta alba* roots was taken and these sections were stain with phloroglucinol and HCL. Sudan red III, Acetic acid, Dil. Iodine solution. The microscopical study reports shows the presence of xylem, phloem, medullary rays, starch grains and calcium oxalate crystals. These histological characteristics present in the plant shows that the plant contains primary and secondary metabolites which having role in different diseases.

Keyword :- Eclipta alba, microscopy, ash value, moisture content and foreign matter.

HERBAL NUTRACEUTICALS IN TREATMENT, PREVENTION OF CVS DISEASES

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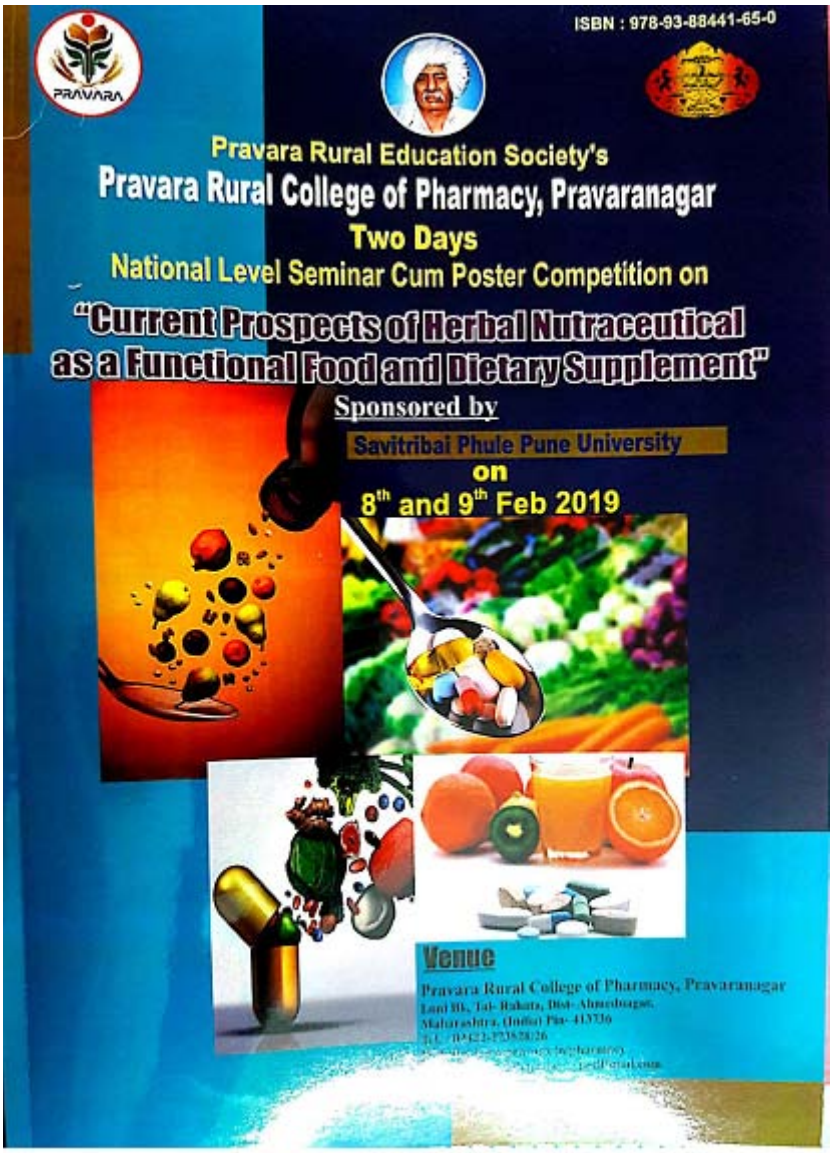

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 ISBN : 978-93-88441-45-6

SIMULTANEOUS ESTIMATION OF SIMVASTATIN AND LABETALOL IN BULK AND SOLID DOSAGE FORM

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ABSTRACT
A simple, accurate, precise, sensitive, and highly selective ultra violet spectrometer method has been developed for the simultaneous estimation of simvastatin and labetalol in bulk and solid dosage form. The estimation of simvastatin was carried out at 239 nm while labetalol was estimated at 222.4 nm. The developed method was validated for linearity range, precision, recovery studies and interference study for mixture, all these parameter showed the adaptability of the method for the method quality analysis of the drug in bulk and combination formulation.
Key Words: Simvastatin, Labetalol, UV Spectrophotometric, Dosage form.

SYNTHESIS AND ANALYSIS OF SOME SUBSTITUTED NEW PYRAZOLINE DERIVATIVES OF BIOLOGICAL INTEREST

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Waghchaure Akshada **Pilgar jayshree**
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ABSTRACT
The synthesis, structure and biological activity of Pyrazoline derivatives have long been the focus of research interests in the of Medicinal Chemistry. A number of Pyrazoline derivatives are reported to possess fascinating biological activities like Antimicrobial, and Anti-tubercular etc. In the present proposal, substituted Benzaldehyde was made to react with various Aromatic substituted ketones to yield different Chalcones. Chalcones so prepared were further allowed to react with Hydrazine Hydrate in the presence of Ethanol and Glacial acetic acid to get Pyrazoline derivatives, further Mannich reaction was carried out to give Mannich base (A1 - A16) all synthesized compound were characterized by IR, H¬1-NMR and CHN Analysis.

All the compounds were evaluated for bactericide at the concentration of two hundred µcg/ml. by victimisationcup-plate agar diffusion methodology. The activity was allotted on completely different micro-organisms (E.coli, S.aureu,) measured in terms of zone of inhibition and compared the standard drug Ciprofloxacin.

The Antitubercular screening was allotted by Middle brook 7H9 agar medium against H37Rv Strain. Middle brook 7H9 agar medium victimization antibiotic as a regular. The Pyrazoline have shown considerable activity at high concentrations. These compounds with the acceptable molecular modification could prove as a drug of selection within the treatment of microbic communicable disease in future.
***KEYWORDS**: Pyrazoline, Anti-tubercular and Antimicrobial activity*

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ABSTRACT :

A simple and more economic RP-HPLC method was developed and subsequently validated for the simultaneous determination of Metformin and Dapagliflozin in bulk and pharmaceutical dosage form. The chromatographic conditions were standardized using a Cosmosil C18 column with 250mm in length and internal diameter of 4.6mm with size 5µm. The analyte detection was carried out by using a UV detector set at a wavelength of 228 nm. The mobile phase consisted of Methanol : Potassium dihydrogenphosphate buffer (80:20% v/v) and retention time of Metformin and Dapagliflozin was found to be 3.6 min and 5.2 min respectively. The calibration curves of two drugs were linear with correlation coefficients of 0.999 and 0.998 over a concentration range of 100-500µg/ml for Metformin and 1-5µg/ml for Dapagliflozin. This method has been validated and shown to be accurate, precise, specific, sensitive, linear, robust and fast. Metformin and Dapagliflozin were subjected to different degradation stress conditions. The degradation products were well resolved from that of pure standard drugs (Metformin and Dapagliflozin) with significant different retention time values. The current method has been statistically validated according to the ICH guidelines and this method has been subsequently developed and applied successfully to determine the levels of Metformin and Dapagliflozin in a combined formulation and in the routine quality control analysis with good accuracy and sensitivity.

Keywords : *Dapagliflozin, Metformin hydrochloride, RP-HPLC .*

SYNTHESIS OF SOME SUBSTITUTED QUINAZOLINE MOIETIES FOR EASY DERIVATISATION

Amol S. Dighe Ankita R. Pawar Shital b.Thakare Suvarna L. Sansare
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ABSTRACT

Quinazoline is an aza derivative of the quinoline, it is also known as 1,3-diazanaphthalene. It has broad spectrum of activity which are anti-inflammatory, anti-bacterial, anti-microbial, anti-HIV, anti-cancer, and many more due to these biological effects it has drawn more interest in synthesis and derivatization of this moiety as much as possible. As the quinazoline is a promising molecule we have focused on the synthesis of this moiety by various ways.

Key words: *Quinazoline, Quinazolinone, Quinazolone.*

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CYTOCHROME OXIDASE ENZYME- ITS ROLE IN DRUG METABOLISM- REVIEW

Amol S. Dighe*[1], Jayshri S. Aher[2], Monali B. Tambe[3]

Department of Pharmaceutical Chemistry, Pravara Rural College of Pharmacy, Pravaranagar, Loni, Maharashtra, India.

ABSTRACT:

Oxidation is probably the most common reaction in xenobiotic metabolism. This reaction is catalyzed by a group of membrane bound monooxygenases found in the smooth endoplasmic reticulum of the liver and other extra hepatic tissues, called the cytochrome P450 monooxygenase enzyme system.CYP450 functions as a multicomponent electron transport system responsible for the oxidative metabolism of variety of endogenous substrate such as the steroids, fatty acids, prostaglandins, and bile acids, exogenous substances including drugs, carcinogens, insecticides, plant toxins, environmental pollutants, and other foreign chemicals. The Enzyme systems carring out this biotransformation are referred to as mixed-function oxidase or monooxygenase. The versatility of Cytochrome P-450 in carrying out a variety of oxidation reaction on a multiple forms of the Enzyme. The reaction requires both molecular oxygen and the reducing agents NADPH. The Mixed function oxidase system is actually made up of several; components, the most important being the super family of Cytochrome P-450 enzymes. The Presence of this enzyme in many other tissues has drug- Oxidizing capability too.

Keywords- CYP450, P450

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BUCKYBALLS

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ABSTRACT:

Buckyballs / Fullerenes are molecules composed entirely of carbon that were discovered in 1985 at Rice University. Ever since their experimental discovery in 1985, fullerenes have attracted considerable attention in different fields of sciences. Investigations of chemical, physical and biological properties of fullerenes have yielded promising information. Their unique carbon cage structure coupled with immense scope for derivatization makes fullerenes a potential therapeutic agent. Henceforth various potential therapeutic applications of fullerenes have been reviewed in the present paper. These include antiHIV- protease activity, photodynamic DNA cleavage, free radical scavenger, antimicrobial action and use of fullerenes as diagnostic agents. Their synthesis is also an challenging task, once synthesized they have various applications, thus we would explore buckyballs as much as possible.

Keywords: Bucky balls, synthesis, therapeutic application.

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A19 Re-exploring Antimalarial Potential of Curcumin by Fo... & Evaluating Curcumin Metal Complex

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Abstract

Drug resistant malarial infection is posing serious problem in effective cont... of malaria worldwide. Curcumin is found to possess broad range of therapeu... activities including modest antimalarial activity. Curcumin with artemisin... derivatives had proved very effective in treating drug resistant malaria... infection. But curcumin has problem of poor aqueous solubility, stability and... bioavailability. The ability of curcumin to complex with transition metals has... been used to overcome above problems. The present study was aimed t... synthesize curcumin-Zn complex and evaluate it for antimalarial activity... Curcumin-Zn complex was prepared using curcumin and zinc sulphate... Characterization of both curcumin and its zinc complex was done by UV, FTIR... and 1H NMR spectroscopy. The solubility of curcumin and curcumin-Zn... complex was evaluated using solubility equilibrium method in 0.1 N HCl,... phosphate buffer pH 6.8 and phosphate buffer pH 7.4. Solubility values for... curcumin were 0.69, 1.01 and 2.61 µg/mL, while solubility of curcumin-Zn... were 1.82, 5.38 and 8.57 µg/mL respectively in 0.1N HCl, phosphate buffer pH... 6.8, phosphate buffer pH 7.4. The solubility of curcumin-Zn complex was... found to be increased significantly. The stability of curcumin and curcumin-Zn... complex was evaluated in phosphate buffer pH 7.4. The % residual amount... remaining after degradation at various time were determined. After 12 hrs, %... residual amount in the solution was found 97.16 and 47.19 % respectively for... curcumin-Zn and curcumin. Curcumin was extensively degraded while... curcumin-Zn complex showed good stability in phosphate buffer pH 7.4.

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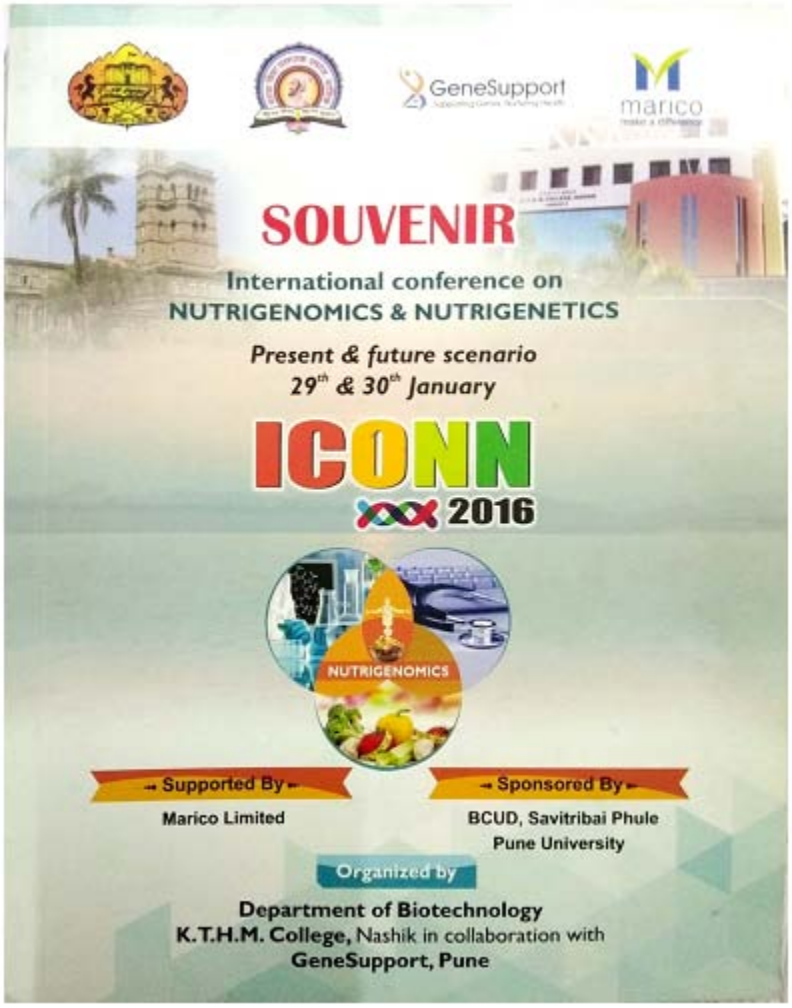

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Curcumin-zn -artemether combination therapy for plasmodium berghei infected mice

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Studies have shown that a new combination therapy with artemisinin derivatives and curcumin is unique, with potential advantages over known Artemisinin Combination Therapy (ACT). The problems ofpoor solubility, stability and bioavailability of curcumin can be overcome by preparing curcumin metalcomplex. In present study curcumin-Zn complex was prepared using zinc sulphate and evaluated for antimalarial activity in combination with artemether. The mice survival and % parasitemia were studied in Plasmodium berghei (P. berghei) infected albino mice treated with curcumin, curcumin-Zn complex and combination of curcumin-Zn with artemether. Oral administration of curcumin-Zn-artemether prolonged the survival of P. berghei infected mice. All themice treated with Curcumin-Zn (5mg/day) artemether (1000 µg) survived for more than 40 days and recovered with no detectable parasitemia. Administration of curcumin-Znartemether combination reduced the parasitemia in mice more effectively compared to that in mice treated with a single drug. In vivo antimalarial activity of curcumin-Zn complex was found superior to curcumin. A single dose of 1000 µg of artemether in combination with curcumin-Zn gives complete protection in P. berghei infected mice. Such suppressive action was superior to that of administration of single drug at the same dose.

Keywords: Artemether, curcumin, curcumin-Zn, mice survival, % parasitemia

Determination of Bioactive Components of Cynodon dactylon by GC-MS Analysis & It's In Vitro Antimicrobial Activity

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Cynodon dactylon (L.) Pers. (family –Poaceae), is traditionally used for curing different aliments. Hence thepresent investigation was carried out to determine the possible chemical components from C.dactylon leaves by GC-MS Technique. This analysis revealed that C.dactylon leaves contain 2-Propanol, 1-hydrazino- (24.37%), Glycerin (3.45%), n-Hexadecanoic acid (14.90%), Hexadecanoic acid, ethyl ester (1.83%), 1-Triacontanol (12.88%), 9,12-Octadecatrienoic acid (Z,Z), Phytol (5.52%) and Stigmasterol (6.68%) justifying the use of this plant to treat many aliments in folk and herbal medicine. The in-vitro antibacterial activity of Cynodon dactylon (L.) Pers. extract in ethanol was carried out by using the well diffusion method. The Streptomycin (100µg/ml) was used as Standard Control antibacterial agent. The antibacterial activity was investigated by using different test organisms. The Zone Diameter of Inhibition and the diameter of the well were recorded. Each assay was carried out for each test organisms used in this project work. Staphylococcus aureus, Escherichia coli, Salmonella typhi & Streptococcus pyogens show nearly equal Zone of Inhibition with respect to Streptomycin.

Keywords: *Cynodon dactylon*, GC-MS Analysis, Antimicrobial Activity, Glycerin, Phytol, Stigmasterol, Streptomycin

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ANTHELMINTIC ACTIVITY OF *HIBISCUS CANNABINUS* SEED EXTRACTS

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ABSTARCT

The aim of the present study was to investigate the anthelmintic activity of *Hibiscus cannabinus* seed extract using adult earthworm, *Pheritima posthuma*. The petroleum ether, ethyl acetate and methanol extract of the crude drug at concentrations of 10mg/ml, 20mg/ml, 30mg/ml, 40mg/ml were tested which involve determination of paralysis time and death time. Albendazole was used as standard and it was found that the concentrated methanolic extract (with no traces of solvent) of the *Hibiscus cannabinus* seeds showed a better anthelminthic activity in comparison with the standard.

Keywords: *Hibiscus cannabinus*, *Pheritima posthuma*, Albendazole, methanol extract

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Design, synthesis and anti-depressant activity of some novel coumarin derivatves

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2Department of Pharmacognosy, Pravara Rural College of Pharmacy, Loni, MH

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The present research work deals with the synthesis, characterisation and to evaluate the synthesized compound for antidepressant activity of a series of coumarin derivatives. Basic coumarin is prepared by Perkin reaction, which further reacted with aryl thiourea by cyclization reaction leads to produce 3-(2-(phenylaminothiazol-4-yl)-2H-chromen-2-one. Totally twelve compounds, were synthesized by conventional method and their purity was determined by TLC and they were characterized by IR and NMR spectroscopic methods. Antidepressant activity of all the synthesized compounds was evaluated by despair swim test by using Sprague Dawley Rats. Standard drug Imipramine was used as the control. In the despair swim test, all the synthesized derivatives showed antidepressant activity. Among them three Compounds (A4, A5 and A9) showed significant antidepressant activity comparing with control drug imipramine and some compound shows mild antidepressant activity. These results are useful for the further investigation in the future.

Keywords: Antidepressant activity, Coumarin, Despair swims test, Perkin reaction, and Sprague Dawley Rat.

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DEVELOPMENT AND VALIDATION OF STABILITY INDICATING RP-HPLC METHOD FOR SIMULTANEOUS ESTIMATION OF PREGABALIN AND ACECLOFENAC IN BULK AND PHARMACEUTICAL DOSAGE FORM

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ABSTRACT

A simple, precise and reproducible Reverse Phase High Performance Liquid Chromatography method was developed and validated for simultaneous estimation of Pregabalin and Aceclofenac in tablet dosage form.Chromatographic separation was achieved by Grace C_{18} (250 mm x 4.6 ID , Particle size- 5 micron) column and methanol : water (60:40v/v) as mobile phase, at a flow rate of 1 ml/min (millilitre per minute) using UV detection at 216nm. Forced degradation experiments were carried out by exposing Aceclofenac and Pregabalin standard and sample for thermal, photolytic, oxidative and acid-base hydrolytic stress conditions.The retention time for Aceclofenac and Pregabalin were obtained as 6.87min and 8.08min. respectively. The method has been validated for linearity, accuracy, precision, LOD, and LOQ. Linearity of Aceclofenac and Pregabalin were found to be 10-50µg/ml.(R^2=0.996) respectively. The accuracy of present method was evaluated at 50%,100%,150%. Recovery was found to be in a range from 99.80%-100.10% for both of the drugs. Intermediate precision studies were carried out and the RSD values were less than 2%.Lower values of LOD (0.19µg/ml) and LOQ (0.59µg/ml) indicated good sensitivity of the method.In this study, the optimization of mobile phase, flow rate, injection volume and wavelength were achieved.This demonstrate that the developed method is simple, precise,accurate and robust for simultaneous estimation of Aceclofenac and pregabalin in tablet dosage form. The method was acceptable for degradation studies of heat, sunlight, acid, base, peroxide which meet the acceptance criteria for forced degradation studies.

Keywords: Aceclofenac, Pregabalin, RP-HPLC, Validation.

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QUANTITATIVE ESTIMATION AND VALIDATION OF ATENOLOL AND AMLODIPINE BESYLATE BY ABSORBTION RATIO METHOD .

SHINDE GANESH, GODGE.R.K, SHEJUL MAHESH

ABSTRACT

The simple, rapid, accurate, precise, cost effective, and reproducible UV spectroscopic method have been developed for the simultaneous estimation of atenolol and amlodipine besylate in bulk and combined tablet dosage form. Atenolol and amlodipine have absorption maxima at 224 and 238.2 nm respectively. Beer's law obeyed in concentration range of 2-24 µg/ml and 2-34 µg/ml for ATN and AMN respectively. The method of Q analysis is based on measurement of absorptivity at 224 nm and at iso-isorptive point 232.2 nm. The recovery studies from tablet are indicative of accuracy of method and are found in between 99.87-101.43 % at three different levels of standard additions. Precision studies showed satisfactory results. A novel approach to use 0.1N HCL as solvent is proved to be beneficial with respect to cost, stability and avoidance of organic solvent.

Key Words: Atenolol, Amlodipine Besylate, UV Spectroscopy , Q analysis .

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METHOD DEVELOPMENT AND VALIDATION OF ASSAY OF ATENOLOL IN TABLET FORMULATION BY UV-VISIBLE SPECTROPHOTOMETRIC

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Abstract

A simple, sensitive, specific, and validated UV method has been developed for the quantitative determination of Atenolol in pure and tablet dosage form. The λmax was found to be 226 nm for assay. The linearity was found in concentration range of 0-150µg/ml. The correlation coefficient was found 0.999. The regression equation was found as y = 0.004x+0.007. The method was validated for linearity, accuracy, precision and System suitability. The LOD and LOQ for estimation of Atenolol were found as 2.088 &6.329 respectively. Recovery of Atenolol was found to be 99.12%.

Keywords: Atenolol, UV Spectrophotometry, Validation, Beer's law

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Effect of GST in Economic Development of Pharma Sector

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bstract

The cascading effect of tax on which prevailed prior to the roduction of VAT was onstructed and revised on 1*st* il 2005. It is over a decade past introduction of VAT which is a lti-stage tax system levied at each ge of production and distribution cess. It is now realized that there strong necessity to amend the ting tax rates and make it mplicated and dynamic for the India, on the Pharmaceutical industry. The focus has also been set to identify and analyze the "now and later" tax structure and its impact on the business of Indian Pharmaceutical industry.

Key words – Goods and Service Tax (GST), Indian Pharmaceutical Industry, Research, Value Added Tax (VAT), Central and State Government.

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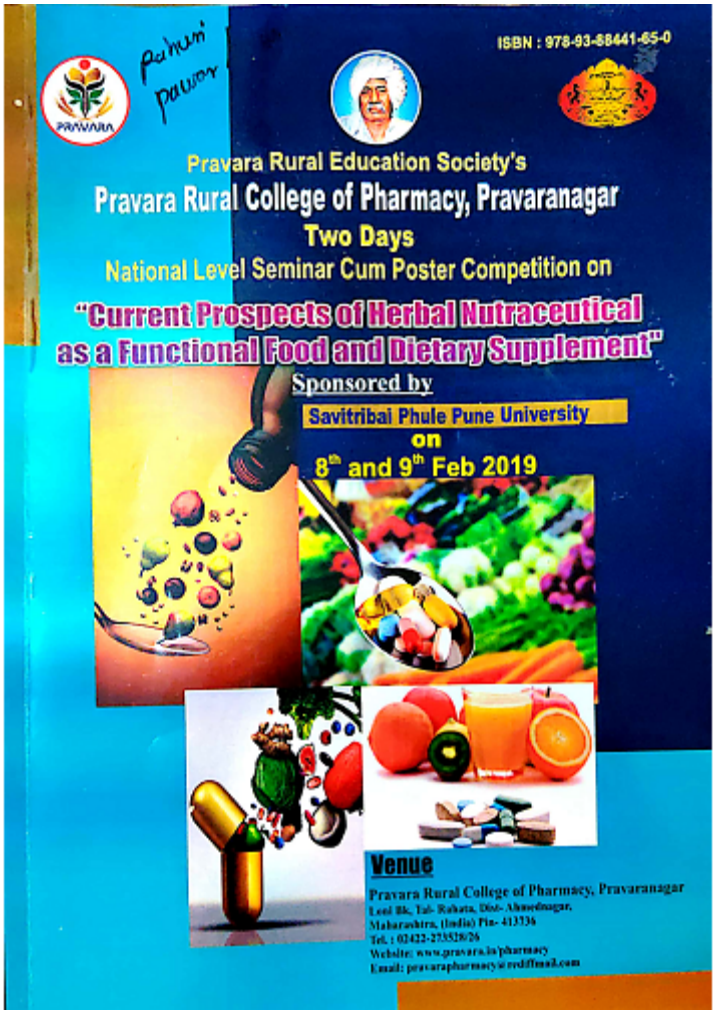

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A REVIEW ON BIOLOGICAL POTENTIAL OF ACHYRANTHES ASPERA

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ABSTRACT:

Achyranthes aspera is an herb in amaranthaceae family, traditionally used in treatment of several diseases (inflammation, diabetes, hypertension, wounds, pain, pneumonia, diarrhea, dysentery, asthma, cough, dropsy, ulcers, piles, rheumatism, scabies and other skin diseases, and fever etc).

The medicinal plants are used for treatment of various diseases because of their safety and effectiveness. Though almost all of its parts are used in traditional systems of medicines, seeds, roots and shoots are the most important parts which are used medicinally. The major chemical constituents are carbohydrates, protein, glycosides, alkaloids, tannins, saponins, flavoides, lignin etc. The phytochemical constituents have been isolated from the plant which possesses activities like antiperiodic, diuretic, purgative, laxative, antiasthmatic, hepatoprotective, anti-allergic and various other important medicinal properties.

The plant is used in indigenous system of medicine as emenagogue, antiarthritic, antifertility, laxative, ecbolic, abentifacient, and anti-helminthic, aphrodisiac, antiviral, anti-plasmodic, and antihypertensive, anticoagulant, diuretic and anti-tumor. It is also useful to treat cough, renal dropsy, fistula, scrofula, skin rash, nasal, infection, chronic malaria, impotence, fever, asthma, piles and snake bites. This plant is astringent, digestive, diuretic, laxative, purgative and stomachic. The juice of the plant is used in the treatment of boils, diarrhea, dysentery, hemorrhoids, rheumatic pains, itches and skin eruption.

Key words- Achyranthes aspera

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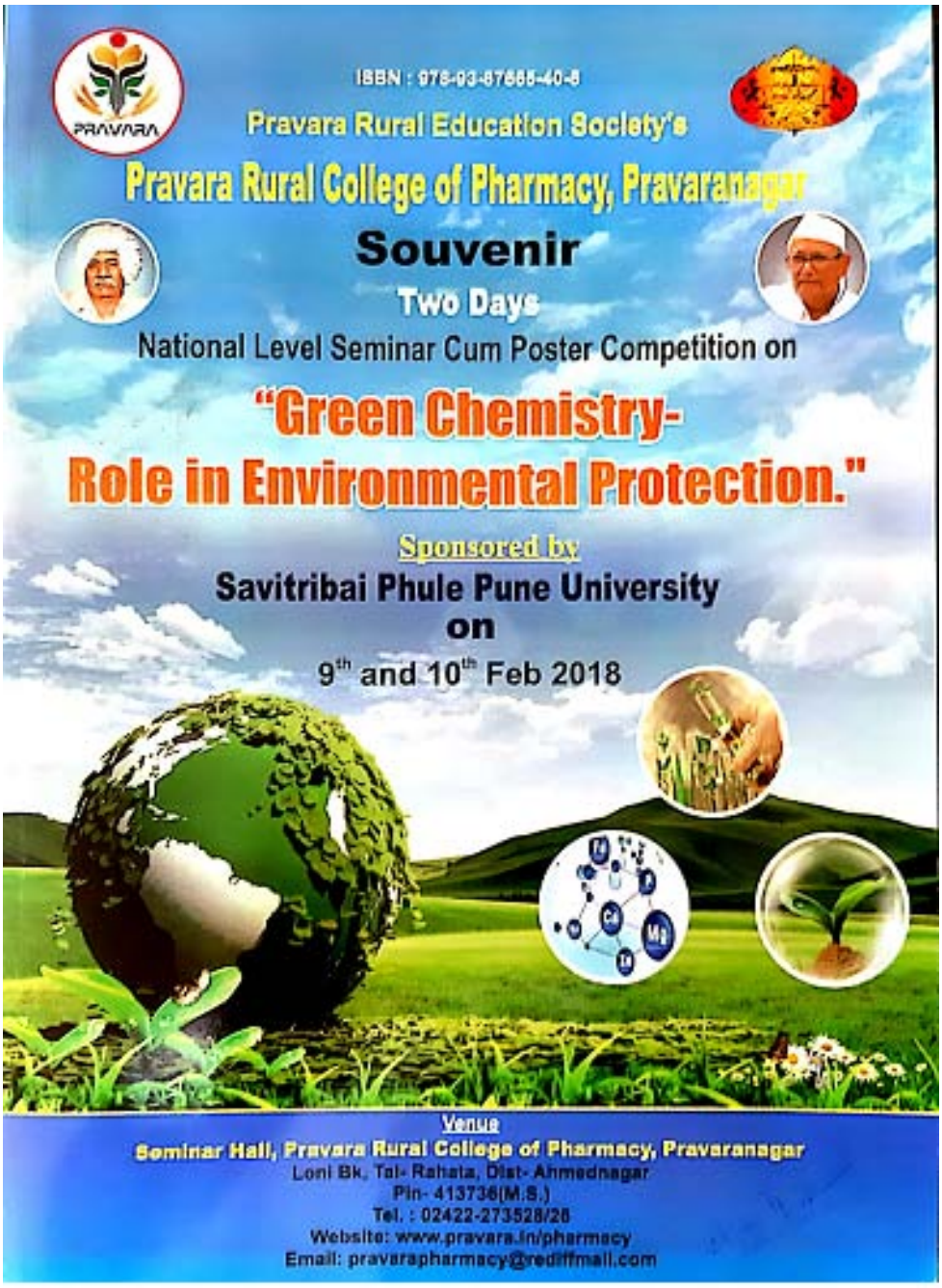

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CHALLENGES AND OPPORTUNITIES IN GREEN CHEMISTRY

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Abstract

Green chemistry is a philosophy and study of the design of products or substances that will not involve materials harmful to the environment. It is modern science of chemistry that deals with the application of environmentally friendly chemical compounds in the various areas of our life such as industrial uses and many others. This area of chemistry had been developed by the need to avoid chemical hazards that organic and inorganic compounds had on the body of humans and animals. The fundamentally attractive concept of green chemistry is solvent free reactions. solvent free reactions can be accelerated by microwave activation and this combined clean technology approach to "greening" chemical reactions.

Key Words: Green Chemistry, Solvent free reaction, Microwave activation, Environment.

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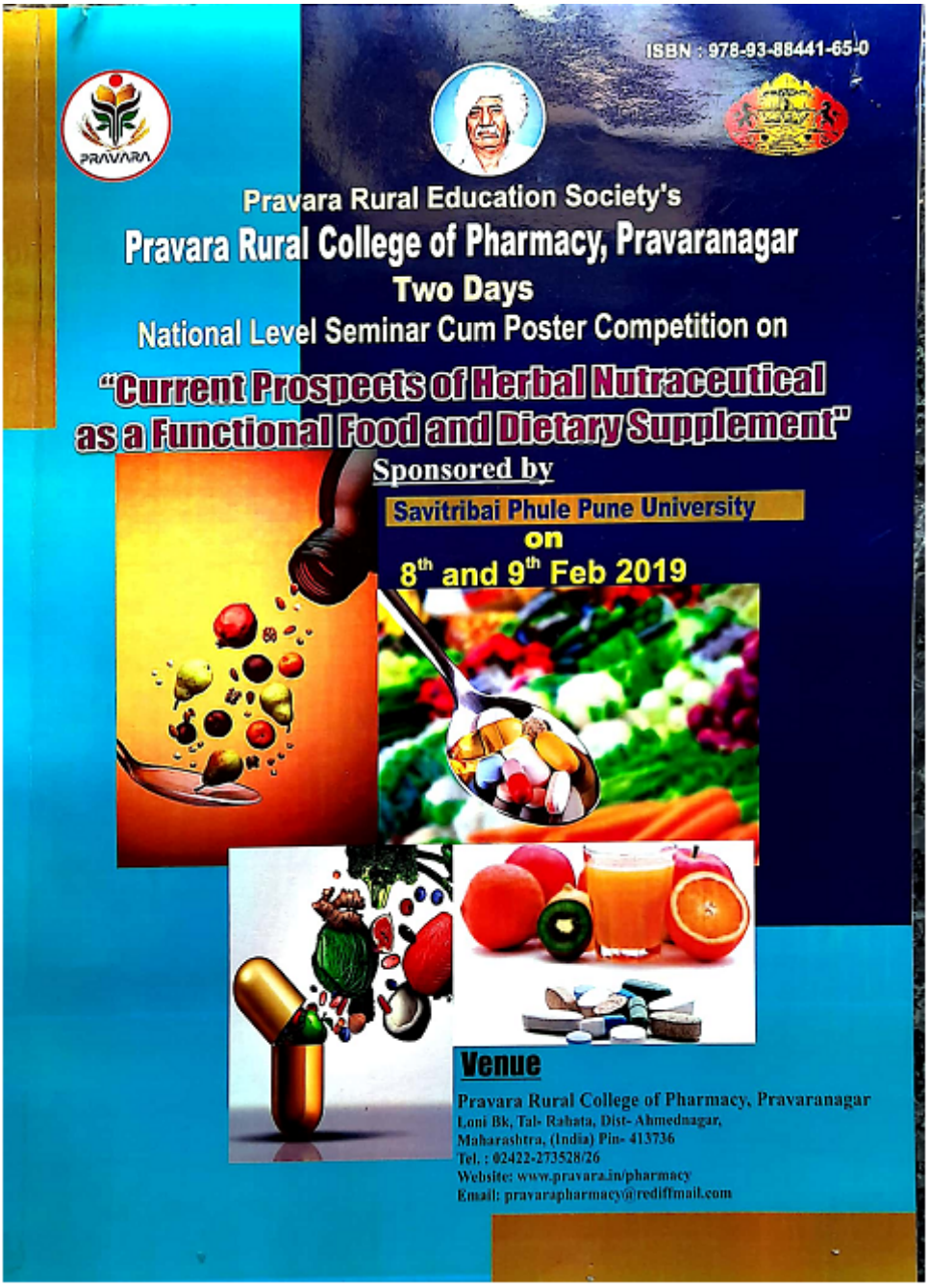

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Current Prospects of Herbal Nutraceutical as a Functional Food and Dietary Supplement ISBN : 978-93-88441-65-0

ANTACID SUSPENSION CONTAINING HERBAL NUTRACEUTICALS (TO MAINTAIN NUTRITIONAL BALANCE)

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ABSTRACT

Many people in the world suffer from peptic ulcers because of the excess acidity. Although many medications are currently available for the management of gastric ulcers and as an Antacid preparation, prolonged use of Antacid drugs may leads to series of adverse effects such as Vitamin B12 deficiency, constipation and imbalance of nutrition. To overcome this problem of nutritional deficiency as well as to reduce stomach acidity the prepared antacid suspension containing herbal nutrition such as *Glycyrrhiza glabra* ,*Pedalium murex L.* and vitamin B complex to maintain the nutrition balanced in acidity induced peptic ulcer.

The need of the prepared formulation is to get both effects as to overcome gastric ulcerative problems in effect of balanced nutritional value.

The prepared formulation is evaluated for various In-vitro test and compared with marketed formulation and It was found that the prepared formulation containing *Glycyrrhiza glabra, Pedalium murex L* is robust and shows a good acid neutralizing capacity with good nutritional balancing.

Key Words: *Ulcer, Antacid, Glycyrrhiza glabra,Pedalium murex L, Vitamin B-Complex*

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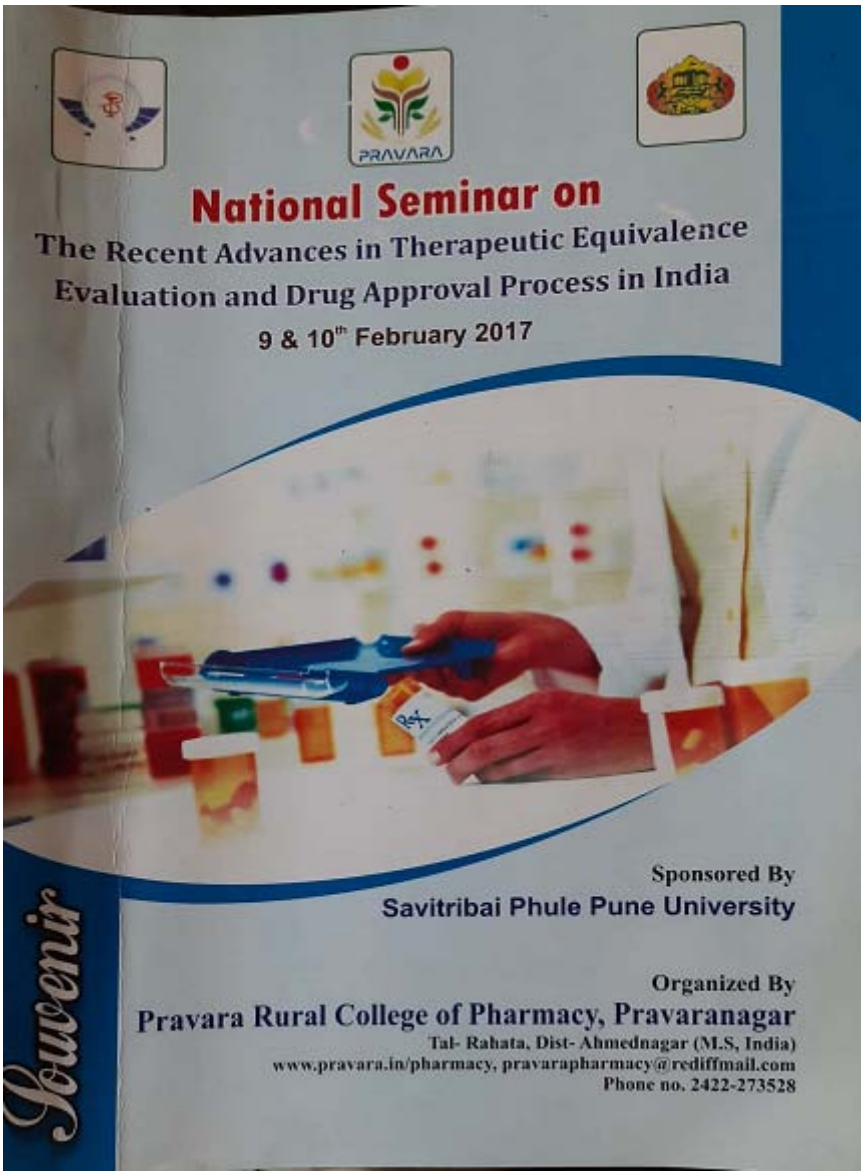

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FORMULATION AND EVALUATION OF ETHYL CELLULOSE MICROSPHERE OF GLIPIZIDE

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ABSTRACT :

Glipizide is used in treatment of diabetes mellitus. In the present study an attempt was made to develop a new sustained drug delivery for Glipizide microspheres by using polymer Ethyl cellulose to improve patient compliance and safety. The microspheres were prepared by solvent evaporation method and characterized by using scanning electron microscope. Sustained release formulation of Glipizide in the form of microspheres was developed to a satisfactory level in term of drug release, content uniformity and micromeritics properties. The compatibility studies were done by IR spectroscopy. The comparison of IR spectrum of drug, excipients and product implies that there was no interaction between drug and polymers and they are compatible with each other. The micromeritic data showed that there was not much significant difference in term of angle of repose, bulk density and porosity. The in-vitro release profiles of microspheres in phosphate buffer pH 7.4 at 37° C confirmed the controlled release of microspheres. Sustained drug delivery for Glipizide microspheres by using polymer Ethyl cellulose was made to improve patient compliance and safety. It is possible to prepare microspheres containing Glipizide by solvent evaporation method, to prolong activity with increased stability without loosing its therapeutic activity. Stability study was carried out.

KeyWords:- Glipizide, diabetes mellitus, microspheres

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Formulation and Evaluation Of Enteric Coated Pellets of Lansoprazole Sodium

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ABSTRACT:

Lansoprazole is a proton pump inhibitor which prevents the stomach from producing acid. Proton pump inhibitors are widely used to treat peptic ulcer, gstroesophageal reflux disease, zollinger-ellison syndrome, also in eradication of H.pyroli infection. Acid labile and moisture sensitive lansoprazole difficult to stabilize in various dosage form. The main aim of the work is to prepare enteric coated pellets of lansoprazole sodium by using methacrylic acid copolymer with drug release above pH 5.5, by using extrusion and spheronization method. The intestine targeted delivery of lansoprazole in enteric coated pellets by using pH sensitive Eudragit polymer. To deliver maximum concentration of drug at the site of action by development of fast disintegrating pellet using super disintegrant and further coating with the aqueous dispersion of Acryl EZE enteric coating polymer. A multiunit pellet system (MUPS) is an approach to develop capsule formulation capsule dosage form containing MUPS, when administered drug dispersed it. Protected from acid and dissolved in duodenum, each pellets acts as a single subunit. The MUPS have good desirable distribution characteristic, reproducibility, transit time and reduce chance of localization of drug delivery .it having less prone to adherence to the intestinal walls, nasogastric and gastromy tubes and giving predictable delivery of the drug product to the site of drug release.

Key Words : Lansoprazole, H.pyroli infection, spheronization

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FORMULATION AND DEVELOPEMENT OF SUSTAINED RELEASE ANTI-DIABETIC MATRIX TABLET.

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ABSTRACT:

In past decade great interest got generated on replacing conventional administration of drugs by delivery system.In present work attempts have been made to formulate sustained release matrix tablets of Metformin hydrochloride by using polymer, which is preferably used as an anti-diabetic and in case of type 2 diabetes mellitus. Matrix tablets were prepared using polymer with HPMC-K100 (Dow), in different concentration by dry granulation technique. The product so formulated are designed as sustained action, sustained release, prolonged action, depot, retard action, delayed action, that products in most case are similar in appearance.

Metformin is an antidiabetic (Hypoglymic) agent. As metformin Hydrochloride Has Poor compressibility and high water solubility. It is need to **Increase Bioavailability, Clinical implications, reduce risk of hospitalization , deliver drug at a near constant rate for approximately 12 hrs, independent of food intact and gastrointestinal P^H.**

In this model, drug in the out side layer exposed to the bathing solution is dissolved first and than diffuses out of the matrix. Obviously, for this system to be diffusion controlled, the rate of dissolution of drug particles with in the matrix must be much faster than the diffusion rate of dissolved drug leaving the matrix.

The product so formulated are designed as sustained action, sustained release, prolonged action, depot, retard action, delayed action, that products in most case are similar in appearance.

Keywords: Metformin, sustained release, Increase bioavailability, Matrix tablets.

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GREEN CHEMISTRY: AN IMPORTANT TOOL IN PHARMACEUTICAL INDUSTRY

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Abstract

An important tool for advancing green chemistry in pharmaceutical applications is sharing information on its use. The complexity of the molecules that are used as active pharmaceutical ingredients (APIs) and the resulting complexity in the synthesis and purification needed to produce a given API, the pharmaceutical industry as major healthcare player should practically apply green practices. Chemists and medicinal scientists can greatly reduce the risk to human health and the environment by following all the valuable principles of green chemistry by practically applying them in Pharma industry. The simple and direct way to apply practically green chemistry in pharmaceuticals is to utilize eco-friendly, non-hazardous, reproducible and efficient solvents and catalysts in synthesis of drug molecules, drug intermediates and in researches involving synthetic chemistry. Green chemistry is being employed to develop revolutionary drug delivery methods that are more effective and less toxic and could benefit millions of patients. Researchers and pharmaceutical companies need to be encouraged and to start the principles of green chemistry while designing the processes and choosing reagents Waste minimization in drug discovery by considering Green Technologies in the Pharmaceutical Industry. The special emphasis should given to practical implementation as its need of future.

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"GST: IMPACT AND IMPLICATIONS ON PARMACEUTICAL INDUSTRY"

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Abstract

GST means Goods and Services Tax. It had been introduced by p Chidambaram was a Finance minister from 2008 to 2010. Actually it is an indirect tax on the manufacturing goods .the GST was replaced by VAT (value added tax) .The main aim is to collect systematic tax on listed goods. The Indian pharma industry, estimated turnover at Rs 450 billion, ranks fourth globally in terms of volume and is amongst the largest producer of pharma products in the world along with US, Japan, Europe and China.2 Similar to the manufacturing industry, the pharma industry also enjoys low cost of production due to economies of scale. But the levy of multiple taxes, loss of credit of tax paid, compliance and litigation cost associated with the present tax set up tend to raise prices which eventually result in causing problems to the pharma industry. With the introduction of GST, the most visible impact appears to be the proposed discontinuance of CST. On the whole, GST is expected to benefit the pharma and healthcare industries. It will create a level playing field for generic drug makers, boost medical tourism and simplify the tax structure. If there is any concern whatsoever, then it relates to the pricing structure (as per latest news). The pharma sector is hoping for a tax respite as it will make affordable healthcare easier to access by all.

Keywords : GST , VAT, Pharma industry ,CST.

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SOLUBILITY ENHANCEMENT TECHNIQUES: A REVIEW ON CONVENTIONAL AND NOVEL APPROACHES

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ABSTRACT:
Most of the drugs in the development pipeline are emerging from the high- throughput screening methodology resulting in increased molecular weights and thus consequential bioavailability problems. Improving oral bioavailability of drugs those given as solid dosage forms remains a challenge for the formulation scientists due to solubility problems. The dissolution rate could be the rate-limiting process in the absorption of a drug from a solid dosage form of relatively insoluble drugs. Therefore increase in dissolution of poorly soluble drugs by solid dispersion technique presents a challenge to the formulation scientists. This article reviews historical background of solid dispersion technology, limitations, classification and various preparation techniques with its advantages and disadvantages. This review also discusses the recent advances in the field of solid dispersion technology. Based on the existing results and authors' reflection, this review give rise to reasoning and suggested choices of carrier or matrix and solid dispersion proceedure.

Keywords: *Solubility enhancement, dissolution enhancement, solid dispersion, characterization.*

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FORMULATION, DEVELOPMENT AND EVALUATION OF OLMESARTAN LOADED NANOSTRUCTURED LIPID CARRIERS TO IMPROVE ORAL BIOAVAILABILITY.

S.D.Mankar, S.S.Siddheshwar

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Abstract:-

The oral route is the route of first choice for drug administration, and allows the attainment of systemic effects of a large variety of biologically active compounds. However, the majority of new chemical entities (NCEs) display very poor aqueous solubility, resulting in low oral bioavailability due to insufficient dissolution throughout the (GIT) gastrointestinal tract **(Kesisoglou et al., 2007; Zhang et al., 2010)**. Especially in poorly soluble, highly permeable (BCS Class II) drugs, the rate of oral absorption is often controlled by the dissolution rate in the GIT **(Lobenberg and Amidon, 2000)**.

Olmesartan medoxomil (OLM) is chemically 4-(1-hydroxy-1-methylethyl)-2-propyl-1-[[2'-(1H-tetrazol-5-yl)[1,1' -biphenyl] -4-yl]methyl] -1H-imidazole-5-carboxylic acid(5-methyl-2-oxo-1,3-dioxol-4-yl) methyl ester **(Hedvati and Pilarsky, 2006)**. It is an angiotensin II receptor antagonist used in the treatment of hypertension **(Dhumal et al., 2010)**. OLM blocks the action of angiotensin II by binding with high selectivity to pharmacological the AT1 receptor and not to the type 2 (AT2) receptor. It binds to the AT1 receptor with a high degree of insuperable and with greater affinity than most other (ARBs) angiotensin receptor blockers **(Scott and McCormack, 2008)**. Thus, OLM is ideal candidate to formulate NLCs to improve its oral bioavailability as it has high log p value and low aqueous solubility. Thus, it was concluded that, there is a need of formulation, optimization and characterization of OLM loaded nanostructured lipid carriers to improve its oral bioavailability.

Keywords:- Olmesartan, nano-lipid crystals, oral bioavailability.

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DESIGN, DEVELOP, AND CHARACTERIZE SOLID LIPID NANOPARTICLES CONTAINING MONTELUKAST SODIUM.

M.S.Bhosale, S.D.Mankar,

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Abstract:-

A high potential for drug delivery has been attributed to particulate drug carriers, especially small particles such as micro particles and colloidal system in nanometer range. Controlled and targeted delivery is one the most enviable requirements from a carrier, which involves the multidisciplinary site-specific or targeted approach **(Bocca et al., 1998)**. Targeted delivery to the diseased lesions is one of the most important aspects of drug delivery system. To convey the accurate desired dose of the drug and diagnostic agent to the lesions, suitable carriers are required. Nanoparticles have important potential applications for the administration of therapeutic and diagnostic agents **(Karanth et al., 2008)**. Nanoparticulate drug delivery system may offer plenty of advantages over conventional dosage forms which include improved, reduced toxicity, enhanced biodistribution and improved patient compliance. Pharmaceutical Nanoparticles are subnano sizes structures, which contain drug or bioactive substances within them and are constituted of several tens or hundreds of atoms or molecules and morphologies (amorphous, crystalline, spherical, needles).

Thus, finally it was planned to design, develop, and characterize solid lipid nanoparticles containing montelukast sodium to solve both the problems such as solubility and extensive first pass metabolism of MKS and thereby enhance bioavailability.

Keywords:- Nanoparticles, montelukast, oral bioavilability.

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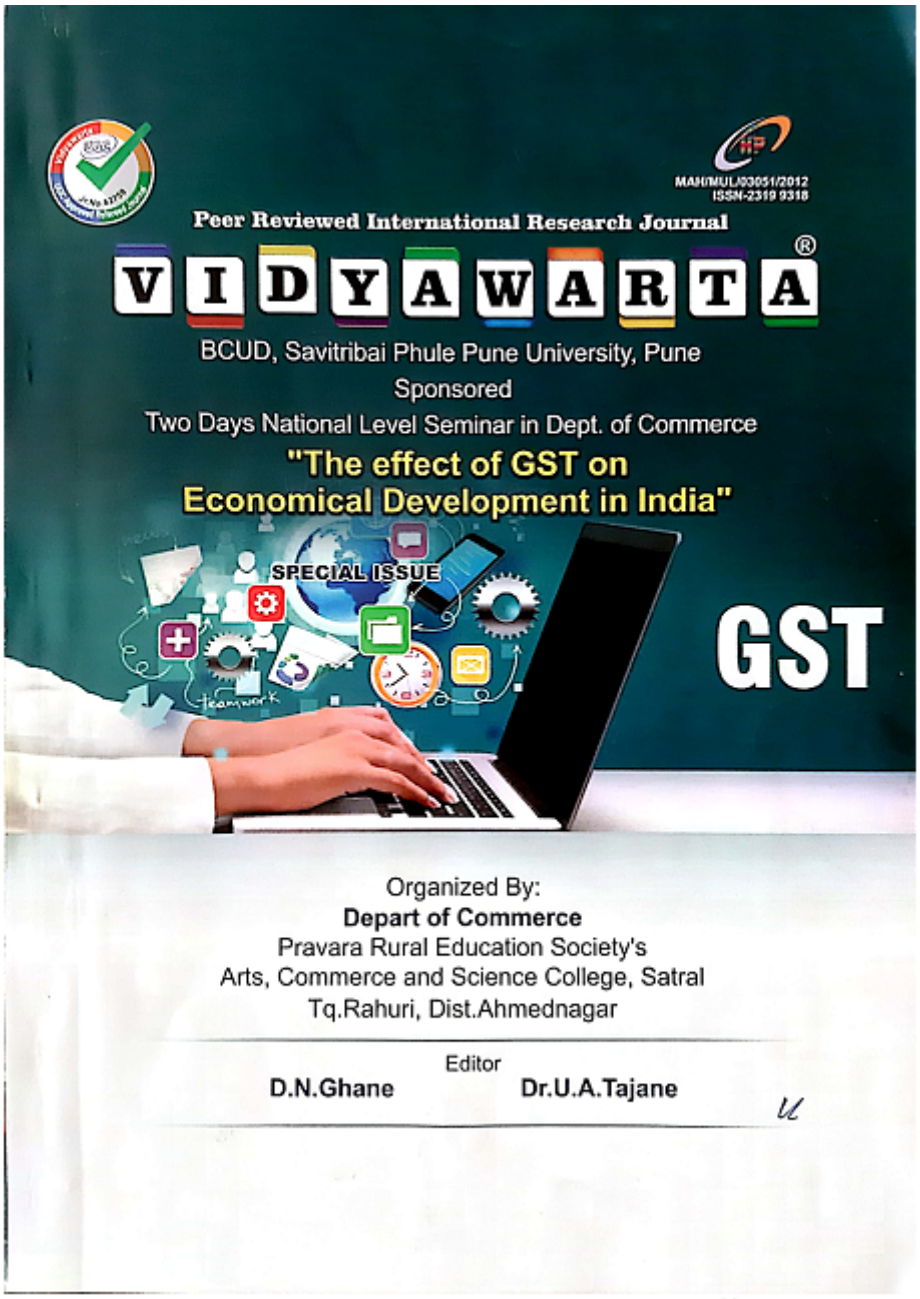

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"Goods and Services Tax (GST) in Indian Pharmaceutical and Its impact on industry"

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Abstract

GST is expected to be a game-changing reform for the Indian economy in the medium to long term since it will flourish a common Indian market and reduce the cascading effect of the tax on the cost of goods and services. If implemented, GST will result in a complete overhaul of the Indian indirect tax system with wide-ranging implications including tax structure, tax incidence, tax computation, tax payment, compliances, and credit utilization and reporting. It is also expected that supply chain and other operational planning opportunities and efficiencies may be available, depending on a company's facts. However, in the short-term/transitional phase, all Industry, including the pharmaceutical industry, are likely to face a number of challenges, including possibly negative financial impacts, the need to assess existing supply chain structures, the need for reconfiguration of IT systems and more. It is, therefore, critical that companies become well known for the proposed GST legislation, begin assessing the impacts that GST is likely to have on their business operations and begin to develop/implement a plan to manage this mega-change by the expected implementation date. The implementation of GST would have a constructive effect on Healthcare industries particularly Pharma. It will help the industries by sorting out the taxation structure since 8 different types of taxes are enforced on pharmaceutical industries today. The merger of all the taxes into one uniform tax will ease the way of doing business. GST would also improve the transportation and supply chain of pharmaceutical product.

Keywords : GST legislation, Healthcare industries , pharmaceutical industries , uniform tax.

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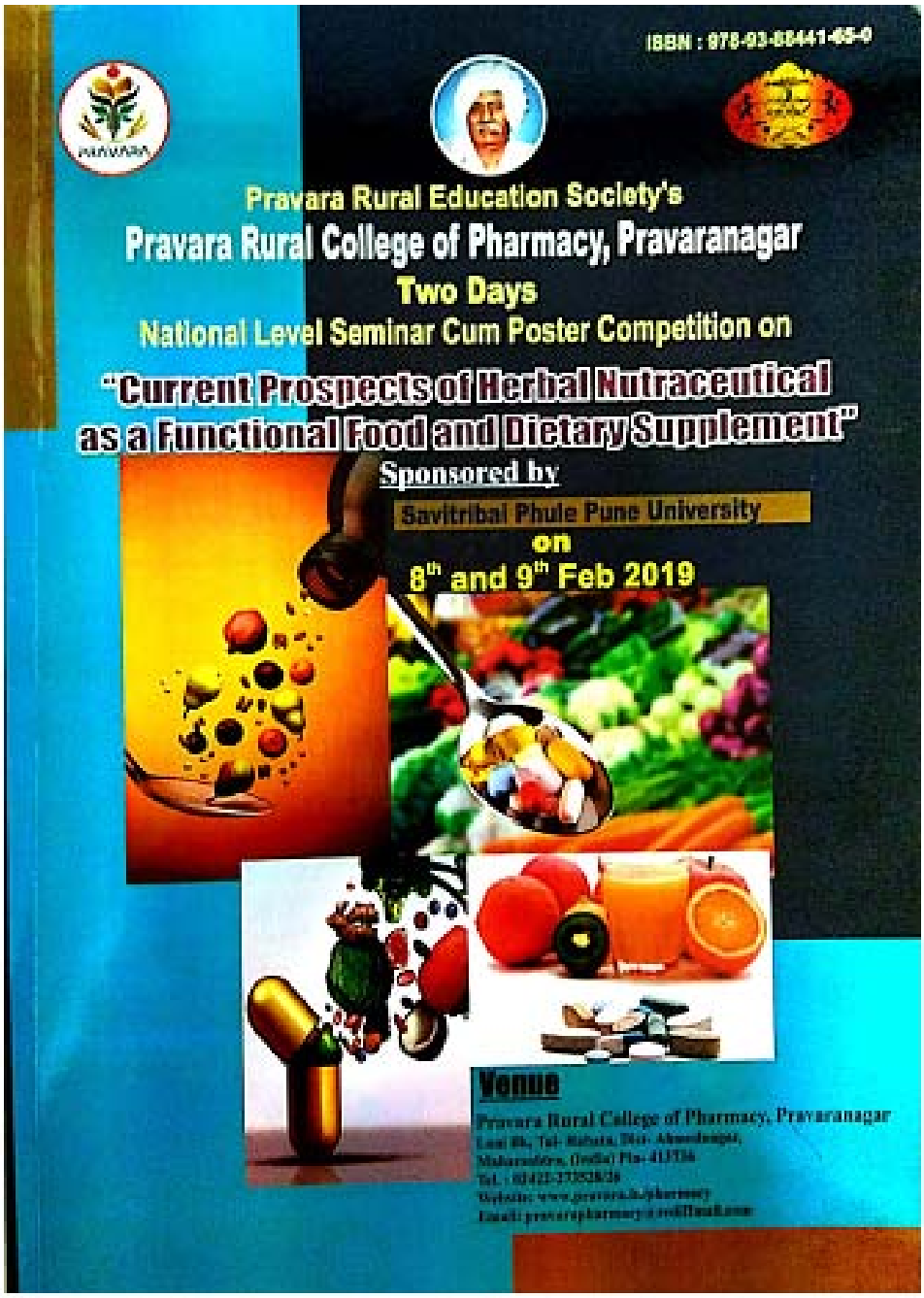

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COMPARATIVE AND BIOLOGICAL IMPORTANCE OF SUBTITUTED TETRAHYDROPRIMIDINE DERIVITIVES IN THE NEW ERA

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Dr. N. S. Dighe

ABSTRACT:-

Microwave induced organic reaction enhancement is a simple, clean, fast, efficient & economical method for the synthesis of organic molecules and has emerged as a tool towards green chemistry. This technique can reduce the time of chemical reaction from hours to minutes. Conventional methods and ultra sonic method of synthetic reactions need longer heating time, elaborate and tedious apparatus set up which result in higher cost and environmental pollution. The concept of research involved in this is directed towards the development of novel heterocyclic compounds for their Anti-cancer activity, Antimicrobial activity and Anti-inflammatory activity.The recent advances in the synthesis and biological activities have led to many investigations of Tetrahdropyrimidinederivatives.Tetrahdropyrimidine is considered as a main pharmacophore for the synthesis of various physiological significance and pharmacological utilized molecules. Tetrahdropyrimidine are a large class of biologically active compounds that exhibits broad spectrum of biological activities such as Anti-HIV, Anticancer, Antifungal, Antibacterial,Sedative, Anticonvulsant, Anti-inflammatory, antihypertensive, Local anesthetic activity and much more.Being considered as advantaged scaffold, the comparative synthesis is made with different substituent.

Keywords: Antibacterial, Anticancer, Anti-inflammatory ,Tetrahydropyrimidine.

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This is to certified that Mr/Ms. Prof Mayur G. Bhosale from PRCOP, Loni has participated/secure — Position in Paper/Poster/Project Presentation in National Symposium-Chemstorm 2k19, organised by ChESA and Department of Chemical Engineering on 29th March 2019 at Pravara Rural Engineering College, Loni

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DESIGN, DEVELOP, AND CHARACTERIZE SOLID LIPID NANOPARTICLES CONTAINING MONTELUKAST SODIUM.

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Keywords:- Nanoparticles, montelukast, oral bioavilability.

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DR. PRIYA RAO

Current Prospects of Herbal Nutraceuticals as a Functional Food and Dietary Supplement ISBN : 978-93-88441-65-0

FORMULATION AND DEVELOPMENT OF POLYHERBAL GRANULES AND ITS NUTRITIONAL CHARACTERIZATION

Miss Prachi Dighe Dr. R. S. Jadhav Prof. T. D. Dukre Dr. P. R. Rao

ABSTRACT:

The aim of the present study was to formulate and evaluate the pharmaceutical quality of polyherbal granules. Polyherbal formulation was prepared using hydroalcoholic extracts of Curcuma longa, Tinospora cordifolia, Withania somnifera to obtain the best formulation; in order to increase the acceptability and adoptability of herbal medicine. The objective of this research work was the conversion of extracted powder into stable, palatable and patient accepatable granules to swallow conviently by using granulation method, using suitabnle binding agents. The granules formulations will be optimised on the basis of acceptable flow properties of granules.The properties of developed herbal granule will be compared with corresponding marketed product. Developed granules will be tested for organoleptic evaluation.

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MR. TUSHAR DUKRE

IDENTIFICATION OF IMPORTANT SECONDARY METABOLITES FROM BAUHINIA RACEMOSA LINN

Mr. Akash B. Kanade **Dr. Jadhav R. S.** **Mr. Dukre. T. P.**
Pravara Rural college of Pharmacy, Pravaranagar, Tal-Rahata,Dist-Ahmednagar
Department of Pharmacognosy.

The Present study reports important secondary metabolites present in *Bauhinia Racemosa Linn*. The *Bauhinia Racemosa Linn* belong to the family Luguminosae , it is populary known as 'Aapta' in Marathi, Kanchnal in Hindi other common name include mountain abony and kachnar (India & Pakistan) The leaves are known to cure skin disease, throat troubles tumours chronic, dysentery, headache, malaria. The powdered Leaves was subjected for extraction by using petroleum ether chloroform, ethanol. These extract were evaluated for detection of various secondary metabolites, like Glycosides, Tannins, Terpenoides, Alkaloids. The preliminary phytochemical screening were done using various chemical test. The study show presences of Alkaloids, Tannins. These secondary metabolites having role in chronic disease as well as they act as source of nutrient.

Keywords- Bauhinia racemosa linn, Petroleum ether, Ethanol etc.

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A-001

Studies on Diuretic and Laxative Activity of the Bark of *Hibiscus Tiliaceus*

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[2]Department of Pharmacognosy, [illegible] College of Pharmacy, [illegible], Nasik.
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Abstract

The main objective of the study was to investigate diuretic and laxative activity of *Hibiscus tiliaceus* bark. Plant material was subjected to extraction by continuous hot percolation method in soxhlet apparatus using petroleum ether, ethyl acetate and methanol as solvents. The method of Lipschitz et al. was employed for the assessment of diuretic activity. In this method, male albino rats were used as experimental animals. The first group of animals serving as control, received normal saline (25 ml/kg, p.o.), the second group received furosemide (10 mg/kg, p.o.) in saline. Other groups received doses of extract (200 and 400 mg/kg) in normal saline. The volume of urine collected was measured at the end of 5 hours. During this period, no food and water was made available to animals. The parameters taken were total urine volume, concentration of Na^+, K^+ and Cl^- in the urine. Na^+ and K^+ concentrations were determined by flame photometer and Cl^- concentration was estimated by titration. Laxative activity was performed according to Capasso et al. on male albino rats. The animal groups were administered orally either with vehicle (1% Tween 80 solution in normal saline, 25 ml/kg), reference standard drug, agar agar (300 mg/kg, p.o.) in saline or doses of extract (200 and 400 mg/kg). After 8h of drug treatment, the faeces were collected and weighed. The present study revealed that, *Hibiscus tiliaceus* bark possesses significant diuretic and laxative activity as compared to standard drugs.

Keywords: *Hibiscus tiliaceus*, Furosemide, Agar-Agar, diuretic activity, laxative activity

A-002

Comprehensive Application of QbD for Impurities in Drug Substances and Drug Products

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Abstract

In this era of competition quality has been given prime importance for pharmaceutical product development. Pharmaceutical industries are regulated by various regulatory authorities like ICH, USFDA, Canadian Drug and Health Agency are emphasizing on the purity requirements and the identification of impurities in APIs. Qualification of the impurities is the process of acquiring and evaluating data that establishes biological safety of an individual impurity; thus revealing the need and scope of impurity profiling of drugs in pharmaceutical research. Quality by Design (QbD) is "a systematic approach to development that begins with predefined objectives and emphasizes product and process understanding and process control, based on sound science and quality risk management" and has the aim of improving product quality and of increasing regulatory flexibility. Impurity level is a critical quality attribute for a drug substance or a drug product because levels higher than the toxicologically qualified amount could affect the safety and efficacy of the product. Control of impurities in drug substance and drug product is described in

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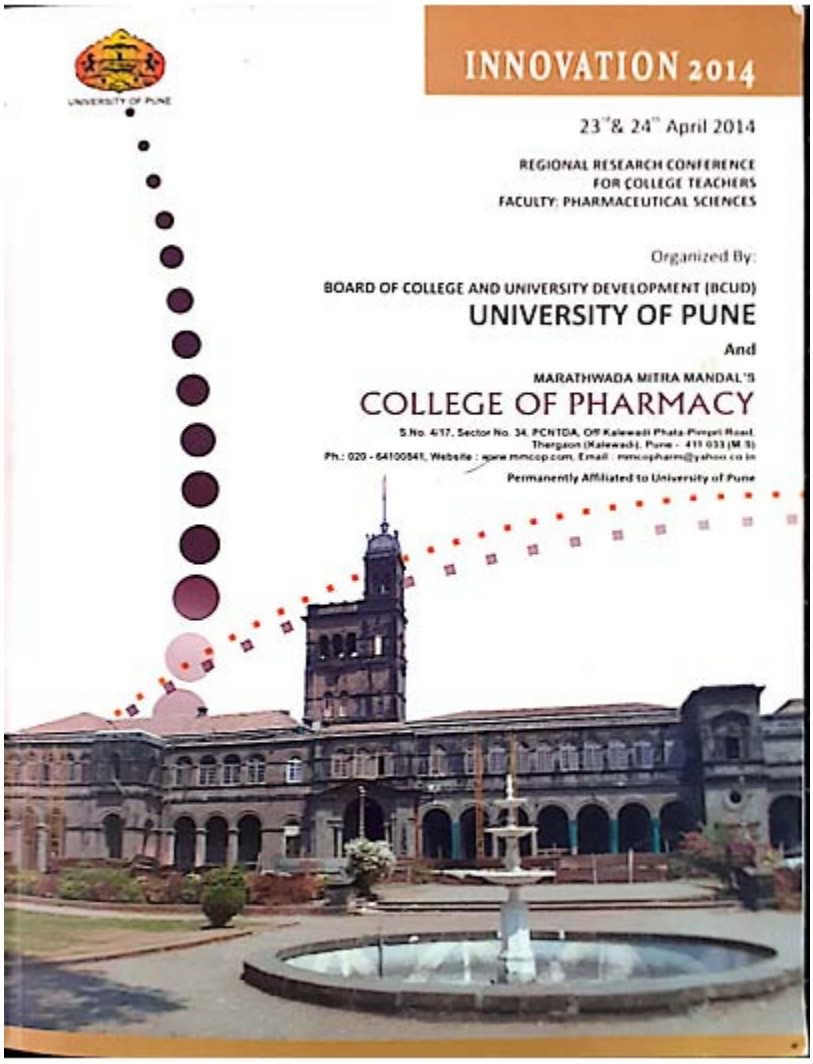

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YNTHESIS & EVALUATION OF NITROGEN CONTAINING HETEROCYCLIC COMPOUND LUDING BENZIMIDAZOLE DERIVATIVES FOR THEIR ANTHELMINTIC, ANTITUBERCULAR AND ANTIMICROBIAL ACTIVITIES

Parjane S.K.; Dengale.S.S ; Asane G.S.
Pravara Rural College of Pharmacy, Pravaranagar-Loni -413736 Dist Ahmednagar

Abstract:

The present research work is aimed to synthesize some novel substituted benzimidazoles derivatives. The synthesized compounds was recyrstalised by suitable solvents and physiochemical properties like Melting point and Rf value was recorded The structures of these compounds will be confirmed by FT- IR, ^{1}H-NMR, mass spectrometry & CHN analysis. All the synthesized compounds will be evaluated for anthelmintic activity. The compounds will also evaluate for antitubercular activity by middle brook agar method using H37RV strain. All the synthesized compounds will be tested for antibacterial activity by cup-plate agar diffusion method.

Keywords: Benzimidazole; antimicrobial; antitubercular;anthelmintic

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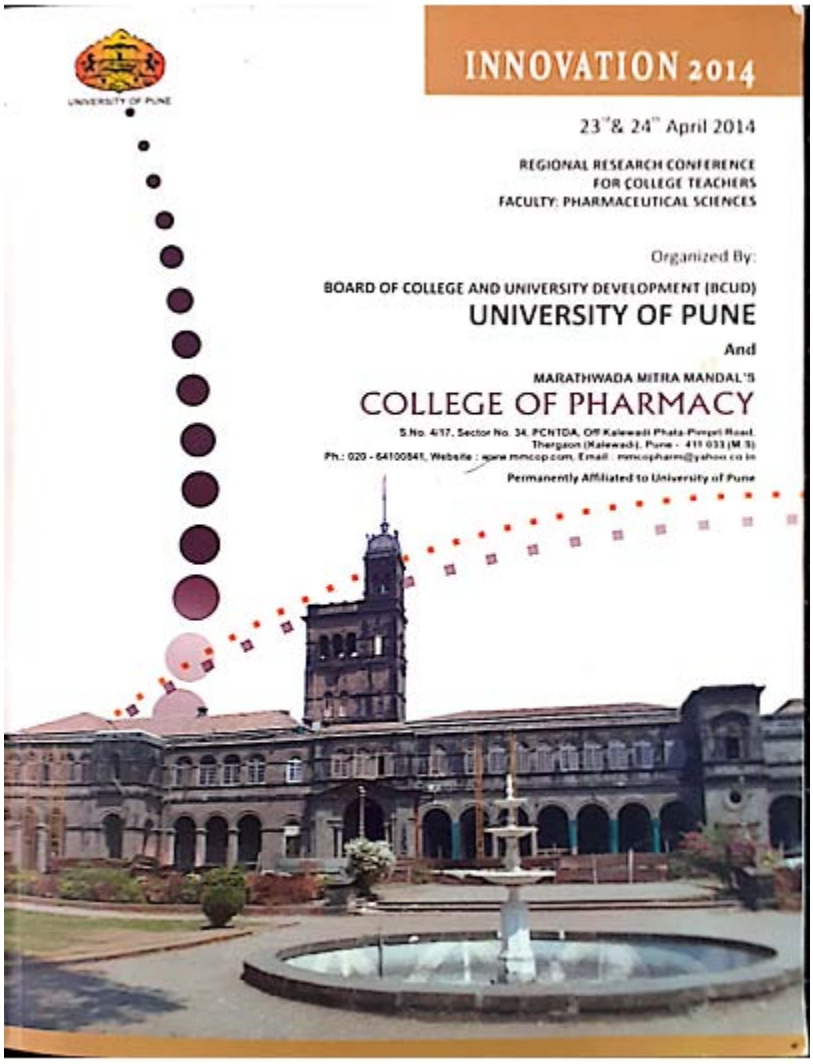

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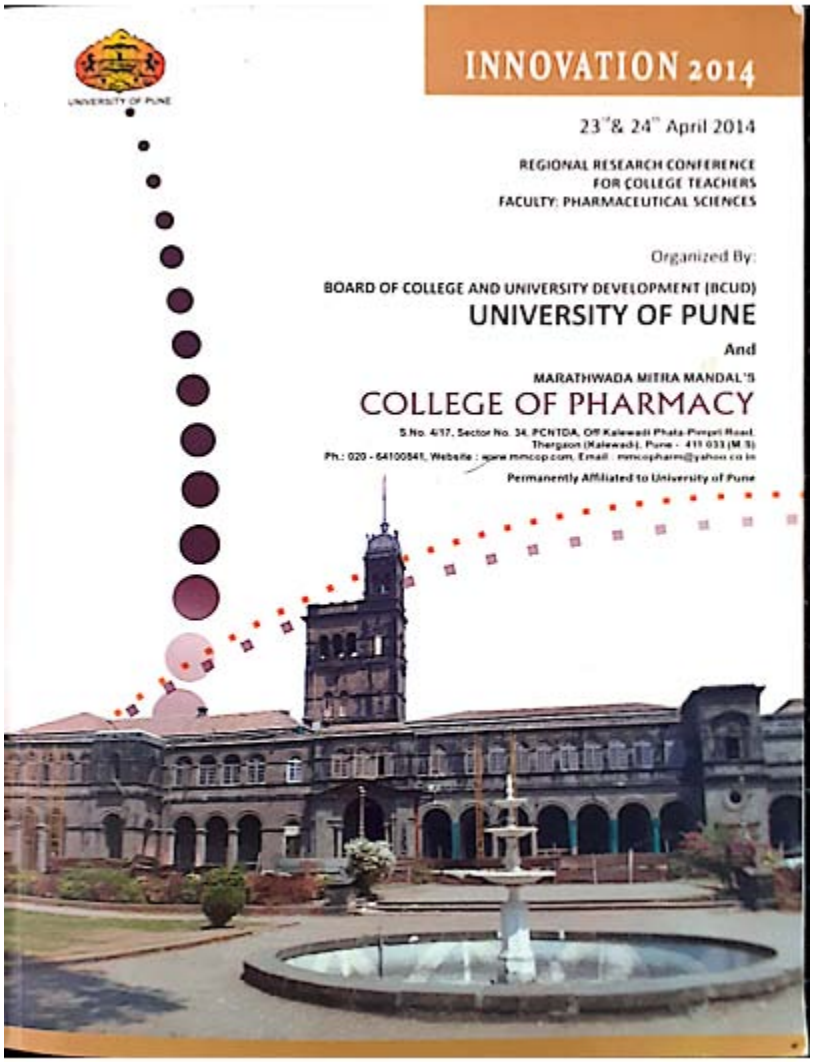
MR. S S DENGALE



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