Hygeia: journal for drugs and medicines
Vol.6 (2) Vol.6 (2) October 2014 –March 2015
ISSN 2229 3590, 0975 6221
www.hygeiajournal.com

Hygeia journal for drugs and medicines is a half yearly international peer reviewed, open access journal specifically intended to publish papers concerning various aspects of Pharmaceutical sciences like Pharmaceutical Chemistry, Medicinal Natural Products, Pharmacology and therapeutics, Clinical Pharmacy, Pharmaceutical Biotechnology, Pharmacoeconomics, Pharmacobiinformatics, Bio pharmaceutics & Pharmacokinetics, Pharmacovigilance, Pharmaceutics, Formulation technologies, Pharmaceutical-analysis, Drug design, Phytochemistry, Pharmaceutical Regulatory affairs, Pharmaceutical Biology and other related fields. Original, informative and scientific research and review articles are invited for publication in the journal.

Contributions must be original and submitted as full papers, short communications, review articles, scientific correspondence or as research news. Manuscript in English should be submitted to the Editor by e-mail or to be uploaded in the website through manuscript submission page. Manuscript should be typewritten, strictly following the “Instructions to authors” which is being published in Hygeia journal. In any case the decision to accept the contribution rests with the editors to make alternations in the text of contributions if they are not confirmed with accepted scientific standards or if they are too repetitive. All contributions must include a brief and clear title, initials of forename, surname and address of each author. Authors are requested to submit the manuscript through hygeiajournal@gmail.com


Hygeia was the Greek goddess of health and she was worshiped in connection with Aesculapius, her father, the god of medicine and health. She is said to be again, the granddaughter of Apollo. She is also the sister of Panakeia or Panacea (means all-cures) Akeso (Goddess of Healing), and Iaso (which means Remedies). Hygeia is usually depicted as a young woman, who holds a sacred snake (symbolizes resurrection), which is often combined with the rod of Asclepius to form the caduceus, or symbol of medicine. Often this snake is portrayed as drinking from a cup (symbolizing medicine), which has become known as the pharmacist’s bowl. Originally, she was the guardian of physical health and later became the goddess of mental health, as well. Eventually, she became a protectress against various kinds of danger, an attribute which she shared with Aesculapius. It is from Hygeia, the word hygiene originates. Hygiene is the science of preserving health. The subject of hygiene includes all of the agencies affecting the physical and mental well being of people. In its public aspects, it is concerned with soil; climate; character; materials and arrangement of dwellings; heating and ventilation; removal of wastes; medical knowledge on the incidence and prevention of disease; and the disposal of the dead.

www.hygeiajournal.com

Editorial | Design of Drugs & Medicines | Health & Nutrition | Formulation Technologies
Pharmaceutical Updates & Reviews | Downloads
© 2013 Hygeia journal for drugs and medicines, all rights reserved. 2229 3590, 0975 622
Editorial Board

Board of Advisors and Reviewers

Prof. Dr. Hilbert Wagner, MS (Pharm) PhD.
Professor, University of Munich, Institute of Pharmacy, Pharmaceutical Biology, Butenandtstrasse5, D-81377, Munich, Germany.

Dr.S.Radhakrishna Pillai M.VSc., PhD.
Asst. Director (Retd), Regional Research Institute, Thiruvananthapuram, Kerala, India.

Prof. Dr. Elizabeth M Williamson, MS (Pharm), PhD.
Professor of Pharmacy and Director of Practice, The School of Pharmacy, University of Reading, Whiteknights, Reading RG6 6AJ, Berkshire, U.K.

Dr. D.Suresh Kumar, M.Sc., PhD.
Sr. Scientist, Sani Laboratories Ltd., Bangalore, India 560 058.

Prof. Dr. Arun Shirwaikar, M.Pharm, PhD.
Dean, Professor of Pharmaceutics, Gulf Pharmacy College, Gulf Medical University, Ajman, UAE.

Prof. Dr. Annie Shirwaikar, M.Pharm, PhD.
Professor, Gulf Pharmacy College, Gulf Medical University. Ajman, UAE.

Dr. T. Emilia Abraham, MSc,PhD.
Senior scientist-F, Chemical Sciences and Technology Division, National Institute for Interdisciplinary Science and Technology, Council of Scientific & Industrial Research (CSIR), Thiruvananthapuram, India, 695019.

Prof. Dr. Unnikrishnan M.K., M.Pharm, PhD.
Professor, Manipal College of Pharmaceutical Sciences, Manipal University, Manipal, Karnataka, India.

Prof. Dr. S.P. Dhanabal, M.Pharm, PhD.
Professor & Head, Dept. of Phytopharmacy and Phytochemistry, JSS College of Pharmacy, Rocklands, Ooty, Tamilnadu, India.

Dr. Senthil Kumar Pachanisamy, M.Pharm, M.Tech (Biotech.), PhD.
Research Asst. Scientist, Pathology & Lab Medicine, Medical University of South Carolina, Charleston, USA.

Prof. Dr. N. Udupa, M.Pharm, PhD.
Dean and Professor, Manipal College of Pharmaceutical sciences, MAHE Manipal, Karnataka, India.

Prof. Dr. C. Veeresham, M.Pharm, PhD.
Professor of Pharmacy, University College of Pharmaceutical Sciences Kakatiya University, Warangal Andhra Pradesh- 506009, India.

Prof. Dr. P. Vijayan, M.Sc., PhD.
Professor of Biotechnology, JSS College of Pharmacy, Rocklands, Ootacamund, Tamilnadu, India – 643 001

Mr. K.C. Sivakumar MSc, MBA.
Information Officer, Bioinformatics Facility, Rajiv Gandhi Center for Biotechnology, Thiruvananthapuram, Kerala, India 95014.

Dr. B. C. Behera, MSc, M.Phil., PhD.
Scientist-D, Agharkar Research Institute, Autonomous Institute of Department of Science and Technology, Govt.of India, G.G. Agarkar Road, Pune-411004, INDIA.

Dr. L. Panayappan, M.Pharm, PhD.
Director, Pasumai Pharmacy, India (P) Ltd. pasumaipr@yaho.co.in Professor & Head, Department of Pharmacy Practice, JKK Nataraja college of Pharmacy, Kumarapalayam, Erode, Tamilnadu, India.

Dr. Narayanacharyulu R, M.Pharm, PhD.
Professor of Pharmaceutics, NGSMIPS, Mangalore, India.

Dr. K.S. Prasanna, M.VSc, Ph.D.
Diplomate, Indian College of Veterinary Pathologists (ICVP) Assistant Professor, Dept.of Vet. Pathology, College of Veterinary and Animal Sciences, Pookot, Wayanad, Kerala, India.

Dr. Nirmal Robinson, M.Pharm, PhD.
Post-Doctoral Fellow, NRC-Institute for Biological Sciences M-54, -1200 Montreal Road, Ottawa, ON-K1A 0R6, Canada.

Prof. Dr. K. Gouthamrajan, M.Pharm., PhD.
Professor & Head, Dept. of Pharmacetics, JSS College of Pharmacy, Rocklands, Ootacamund, Tamilnadu, India – 643 001.

Dr. Srim and S.M. Pharm., PhD.
Professor & Head, Department of Pharmacy Practice, Sri Ramakrishna college of Pharmacy, SRIPMS, Coimbatore, Tamilnadu, India - 641044.
Dr. B. Narasimhan, M. Pharm., PhD.
Associate Professor, Dept. of Pharmaceutical Sciences, M.D. University, Rohtak, Haryana., India.

Dr. Shirley Samson Varghese M. Pharm, PhD
Sr. Pharmacologist, Pharmaceutical Affairs & Drug Control
Ministry of Health, Sultanate of Oman

Dr. S. Radhakrishnan, PhD (Psy)
Director, SKITRAC (Skills Training Centre)
8/1M Mansion building, Race Course, Coimbatore -18, India.
email.drmindsr@yahoo.co.in

Dr. Konstantinos M. Kasiotis, PhD
Research Assistant
Benaki Phytopathological Institute, Department of Pesticides Control and Phytopharmacy,
Laboratory of Pesticides Toxicology, 8 Stefanou Delta Str.,
Kifissia, Athens, Greece 14561

Dr. C. Srinivas Reddy M. Pharm., PhD.
Principal, Vaagdevi College of Pharmacy, Ramnagar, Warangal, AP, India.

Dr. Srinivas Rao Chennamaneni, M. Pharm., PhD
Pharmacology and Pharmacokinetics, iVeena LLC and Research Associate,
John A Moran Eye Center, University of Utah,
Salt Lake City, Utah.

Dr. Ravi Mahalingam, M. Pharm., PhD.
Chief Operating Officer,
Formurex, Inc., Stockton, California, United States.
Adjunct Professor, University of the Pacific.

Dr. SM Kadri, MB: MPH/ICHD
FFP Fellow, Public Health Foundation of India.
Epidemiologist, Division of Epidemiology and Public Health, Kashmir, India.
Medical Adviser to Gerson Lehrman Group's Council of Healthcare Advisors NY, USA.

Dr. Khaled Nabih Zaki Rashed, M.Sc, PhD
Researcher, National Research Centre, Pharmaceutical and Drug Industries Research Division, Dokki, Giza, Egypt.

Editor - in - Chief and Managing Editor

Dr. Madhu C. Divakar, BSc, M. Pharm, PhD, PGDHRM.
CD remedies, Nehurungar, Coimbatore, Tamil Nadu 641006
Former Director & Professor, Crescent College of Pharmaceutical sciences, Kannur, Kerala, India.
madhu.divakar@gmail.com

Editorial Board (Technical)

Mr. Prasanth R. M. Pharm, Dr. Subash Philip, M. Pharm,
(Crescent College of Pharmaceutical Sciences, Kannur, India.)
Mr. Siyad AR, M. Pharm. (Mangere Community Pharmacy, 12 Waddon Place, Mangere, Auckland, New Zealand)
Mr. Yuvaraj S. M. Pharm (Christian Medical College, Vellore, Tamilnadu, India.)

Editorial Board (Reviews & Information)

Dr. Vinod K. R. M. Pharm, FAGE, PGDMM, Nalanda College of Pharmacy, Nalgonda, Andhra Pradesh, India.
Mrs. Sandhya S. M. Pharm, (PhD) FAGE, Nalanda College of Pharmacy, Nalgonda-508001, Andhra Pradesh, India.
Dr. Lakshmi Devi LS, M. Pharm, Sri Ramakrishna College of Pharmacy, SRIPMS, Coimbatore, Tamil Nadu, India.

Place of Publication
Coimbatore, Tamilnadu, India 641006
+91 422 2539477, +91 9895017413
hygeiajournal@gmail.com
Instructions to Authors

*Hygeia journal for drugs and medicines* is specifically intended to publish papers concerning Medicinal Chemistry, Formulation technologies, Medicinal Natural products, Pharmacology, Clinical Pharmacy, Pharmaceutical Biotechnology, Pharmacoeconomics, Pharmaco bioinformatics, Bio Pharmaceutics, Pharmacokinetics, Pharmacovigilance, and other related fields. Contributions must be original and submitted as full papers, short communications, review articles, scientific correspondence or as research news. Manuscript in English (Typed in Times New Roman font style with double spacing, 12 font size, simple table formatting) should be submitted to the Editor by E-mail. In any case the decision to accept the contribution rests with the editors to make alternations in the text of contributions if they are not confirmed with accepted scientific standards or if they are too repetitive. All contributions must include a brief and clear title, initials of fore name, surname and address of each author.

Full papers must include: -

**Abstract**

A summary of not more than 150 words should be clear and factual in content. Abstract must present the reason of study, the main findings and principal conclusion. Follow the structured abstract pattern and include Plan, Prologue (Preface), Methodology, Outcome and Key words of the research work.

**Introduction**

The introduction should supply adequate background information to allow the reader to understand and evaluate the results of the present study, and the purpose of study should be clearly stated.

**Materials and methods (Experimental)**

The section on materials and methods should include brief details on the methodology adopted sufficient to repeat the experiment. Methods for which adequate references can be cited are not to be described. Units of measure should be metric or preferably SI methods.

**Results and Discussion**

This section include only the results of the experiments, important findings, should be stated in a relevant sequence. Illustrate the results with figures or tables in a concise manner where necessary. Results must be precise and comprehensive and should not suffer from ambiguities.

**Conclusion**

This part should provide an interpretation of the results in relation to previously published work and to the experimental system followed to the present study. Do not repeat data already stated in results in details. All illustrations must be numbered using Roman numerals in their order of citation in the text. Illustration may be accepted if they enhance a paper's content scientifically. Every table must be on a single separate sheet presented neatly depicted on good quality tracing paper.

**Acknowledgment**

Acknowledgment of financial assistance and of personnel assistance is given in separate paragraphs.

**References**

The references section must include all relevant sources and all listed references must be sited in the text. Strictly follow the styles shown in the examples below: (for Journals and published books)

Author AB., Author CD. Article title. *Journal title* year; Vol, issue: page no.
Author AB. *Title of the book*, Publisher, Place of publication, edn, *year*; page no.
Web sites: official Govt. web sites (for research) can be included. For example website address can be written as: Author AB. *Title of the article*, Publisher, date of publication, date of Update/revision, available from http://www.websitename.com

**Short communications**

The divisions of the manuscript into separate section is unnecessary and only a discussion and an experimental section must be reported.

**Review Articles**

(not exceeding 5,000 words) must Project new concepts in a presentable manner. Scientific correspondence contains technical comments from the published articles.
Research News and views
Information about various new and novel, technical and scientific advances in Pharmaceutical field or related scientific areas.

Article Processing Charge
The authors have to pay the article processing fee of INR.1200/- for Indian authors and $50 for foreign authors, irrespective of the number of pages of manuscript. But if the number of pages of the final manuscript ready for printing fall below five pages, the author has to pay only INR.200/- per page. (For eg. If the total number of pages are 5, then the author has to pay only 5 x 200/- = INR 1000/-)

Article Processing Charge (APC) pay for: Immediate, worldwide open access to the full article text, Developing and maintaining electronic tools for peer review and publication, Preparation in various formats for online publication, Securing inclusion in various abstracting agencies, enabling electronic citation in other journals that are available electronically.

Abbreviations of journal names

American Journal of Cardiology - (Am J Cardiol )
American Journal of Hospital Pharmacy- (Am J Hosp Pharm)
American Journal of Medicine- (Am J Med)
American Journal of Medical Sciences - (Am J Med Sci)
American Pharmacy- (Am Pharm)
American Journal of Pharmacy- (Am J Pharm)
American Journal of Physiology - (Am J Physiol)
Analytical Chemistry- (Anal Chem)
British Journal of Experimental Pathology - (Br J Exp Pathol)
British Journal of Pharmacology and Chemotherapy- (Br J Pharmaco)l
British Heart Journal- (Brit Heart J)
Canadian Journal of Pharmaceutical Sciences- (Can J Pharm Sci)
Canadian Medical Association Journal- (Can Med Assoc J)
Cardiovascular Research- (Cardiovasc Res)
Chemical and Engineering News - (Chem Eng News)
Clinical Pharmacokinetics- (Clin Pharmacokinet)
Current Science - (Current Sci)
Drug Development and Industrial Pharmacy- (Drug Develop Ind Pharm)
Helvetica Chimica Acta- (Helv Chim Acta)
Indian Journal of Medical Sciences- (Indian J Med Sci)
Indian Journal of Pharmaceutical Sciences - (Indian J Pharm Sci)
Journal of the American Chemical Society - (J Am Chem Soc)
Journal of Biological Chemistry- (J Biol Chem)
Journal of Controlled Release- (J Control Release)
Journal of Medicinal Chemistry- (J Med Chem)
Journal of Pharmacology and Experimental Therapeutics- (J Pharmaco)l Exp Ther)
Journal of Pharmacy and Pharmacology- (J Pharmaco)l
Lancet - (Lancet)
Nature- (Nature)
The Pharmaceutical Journal (Pharm J)
Pharmacological Research Communications- (Pharmacol Res Commun)
Science- (Science)
Hygeia journal for Drugs and Medicines (Hygeia J D Med.)

Authors are requested to submit the manuscript using online submission form or E-mail us at hygeiajournal@gmail.com
Hygeia.J.D.Med.6(2) October 2014 -March 2015

Editorial

- Pharmacovigilance
  Dr. Shirley Samson Varghese
  [Abstract] [Full Text] [Pdf] [doi:10.15254/H.J.D.Med.6.2014.9]

Research Articles

- In Vitro Anticancer Activity of Papain Hydrolysates of Oyster Mushroom (Pleurotus ostreatus) Protein
  Sundaram Meiginanalamkshi, Aarthi KS, Parthiban M and Palanisammi A
  [Abstract] [Full Text] [Pdf] [References] [doi:10.15254/H.J.D.Med.6.2014.130]

- Formulation and Evaluation of Cream Containing Antifungal Agents, Antibacterial Agents and Corticosteroids
  A. Premkumar, T. Muthukumaran, V. Ganesan, Shanmugam R, Priyanka D.L
  [Abstract] [Full Text] [Pdf] [References] [doi:10.15254/H.J.D.Med.6.2014.131]

- Phytochemical Analysis and Histology of Strychnos potatorum L. Seeds
  Shanti Bhushan Mishra and M. Vijayakumar
  [Abstract] [Full Text] [Pdf] [References] [doi:10.15254/H.J.D.Med.6.2014.132]

- Prospective Evaluation of Drug Prescribing and Improvement of Drug Safety in Renal Failure Patients
  Manjula Devi A.S., Bittu Thomas, Annu Joseph, Kavuri Sravani.
  [Abstract] [Full Text] [Pdf] [References] [doi:10.15254/H.J.D.Med.6.2014.133]

- Development and Validation of an Antidiabetic Polyherbal Formulation Containing Curcumin Using RP-UFLC Method.
  Rashmi N G, Gurupadayya B M, Sirisha Tadiboyina, Jinesh B Nagavi, Chetan G Shinde
  [Abstract] [Full Text] [Pdf] [References] [doi:10.15254/H.J.D.Med.6.2014.134]

- Pharmacognostical Investigation of Indigofera barberi Gamble (Fabaceae) – A Threatened Medicinal Herb
  Srinivasan N and Sathyanarayana D
  [Abstract] [Full Text] [Pdf] [References] [doi: 10.15254/H.J.D.Med.6.2014.135]

- Bioavailability Enhancement of Ziprasidone: Optimization of Carriers and Methods Employed
  Murthy S N Varanasi, John S, Srikar G, Radha Madhavi B
  [Abstract] [Full Text] [Pdf] [References] [doi: 10.15254/H.J.D.Med.6.2014.136]

Review Articles

- Autophagy: A Janus-Faced Role in Inflammation and Cancer
  Mohannad A. Elkhider and Bob Chaudhuri
  [Abstract] [Full Text] [Pdf] [References] [doi: 10.15254/H.J.D.Med.6.2014.137]
Pharmacovigilance (PV) is the science and activities relating to the detection, assessment, understanding and prevention of adverse effects or any other drug-related problem. WHO established its Programme for International Drug Monitoring in response to the thalidomide disaster detected in 1961. The aims of PV are to enhance patient care and patient safety in relation to the use of medicines; and to support public health programs by providing reliable, balanced information for the effective assessment of the risk-benefit profile of medicines. Though it was set in motion several decades ago, some countries still look upon PV as a ritual or a copycat strategy to comply with the International bodies. PV is not yet felt as an intrinsic need…


In Vitro Anticancer Activity of Papain Hydrolysates of Oyster Mushroom (Pleurotus Ostreatus) Protein

Sundaram Meignanalakshmi, Aarthi KS, Parthiban M and Palanisammi A
Department of Animal Biotechnology, Madras Veterinary College, Chennai-7

ABSTRACT

Plan: The present study has been undertaken to evaluate the in vitro anticancer activity of papain hydrolysates of Oyster mushroom (Pleurotus ostreatus) protein.

Preface: Oyster mushroom protein was isolated by phosphate buffer method and concentration of protein was found to be 24mg/g of Oyster mushroom.

Methodology: The total protein was enzyme hydrolysed by papain (enzyme and substrate was added at a ratio of 1:5). In vitro anticancer activity was studied by Percentage cell inhibition in MCF-7 cell line using MTT assay. In vitro percentage cell viability was tested in vero cell line.

Outcome: Papain hydrolysates was found to be having highest percentage cell inhibition of 75.82% at 100 µg/ml, 89.83% at 500 µg/ml concentration respectively in MCF-7 cell line. Papain hydrolysates were found to be having highest percentage cell viability of 97.23% at 100 µg/ml and 83.72% at 500 µg/ml concentration respectively.

Key words: Oyster mushroom, anticancer activity, Papain hydrolysates, MTT assay, Percentage cell inhibition, Percentage cell viability.

Received: 5 July 2014, Revised: 20 July 2014, Accepted: 30 July 2014, Available online: 10 October 2014
ABSTRACT

Plan: To evaluate the Pharmacognostic properties including physicochemical characters and HPTLC profile of seeds of Strychnos potatorum L.
Methodology: Micro and macroscopic characters of fresh and dried seed samples were analyzed. Physicochemical studies, fluorescent behavior of seeds and estimation of Quercetin by HPTLC were performing by using standard procedure.
Outcome: Microscopic studies revealed that testa comprises two different region: the outer region consists shrunken parenchyma and inner is trichome zone with dense trichomes occur very close to each other. Calcium oxalate prismatic crystals are frequently seen. Physicochemical parameters such as foreign matters, moisture content, extractive values, ash content, and fluorescent behavior of seed powder were also determined. This report on the pharmacognostic studies of S. potatorum may help investigators, in the characterization of the crude drug and to screen pharmacological activities of this species.

Key words: Strychnos potatorum, HPTLC, Phytochemical and Pharmacognostic screening, Quercetin
Prospective Evaluation of Drug Prescribing and Improvement of Drug Safety in Renal Failure Patients

Manjula Devi A. S, Bittu Thomas, Annu Joseph, Kavuri Sravani.
College of Pharmacy, SRIPMS, SriRamakrishna Hospital Campus, Coimbatore, Tamilnadu, India -641044.

ABSTRACT

Plan: To assess the incidence of inappropriate dosing of renally excreted drugs in hospitalized patients with renal impairment.
Preface: Inappropriate dosing in patients with renal dysfunction can cause drug accumulation and toxicity.
Method: Creatinine clearance or estimated glomerular filtration rate of patients with serum creatinine greater than 1.7 mg% was calculated using Cockroft-Gault equation and Modified Diet in Renal Disease equation respectively. Dose of all potentially nephrotoxic drugs was evaluated using the published drug dosing guidelines and the new dose or dosing interval was recommended based on the patient’s individual degree of renal impairment.
Outcome: Five hundred and six drugs in 50 patients were evaluated of which the dosages of 88 (17.39%) drugs were not adjusted at the time of prescribing. Most of the drugs requiring dose adjustment were antibiotics (39.77%) and antihypertensives (14.77%). About 27% of the drugs were to be avoided strictly.
Conclusion: Drug dosing evaluation and concurrent feedback mechanism by the pharmacist improve drug safety in patients with renal impairment.

Keywords: Renal impairment, Creatinine clearance, Dosage adjustment, Drug safety.

Received: 16august 2014, Revised: 25August 2014, Accepted: 30 August 2014, Available online: 10 October 2014

Development and Validation of an Antidiabetic Polyherbal Formulation Containing Curcumin Using RP-UFLC Method.

Rashmi N G, Gurupadayya B M, Sirisha Tadiboyina, Jinesh B Nagavi, Chetan G Shinde
Department of Pharma. Chemistry, JSS College of Pharmacy, JSS University, Mysore, Karnataka, India.

ABSTRACT

Plan: The principle destination of our work was to develop a simple, rapid and sensitive reverse phase ultra-fast liquid chromatographic (RP-UFLC) method for estimation of curcumin in anti-diabetic poly herbal formulation (Mehagni).
Methodology: Chromatography was carried on a reverse phase C18 column (250 x 4.6 mm) with the mixture of methanol and 2% acetic acid as a mobile phase at the proportion of 70:30 v/v with the flow rate of 1.2 ml/min. The absorbance measured at 420 nm by PDA detector.
Outcome: Optimized chromatographic conditions were achieved and results showed good peak resolution. The retention time was found at 5.02 min. The method was validated as indicated by International Conference on Harmonization guidelines. The parameters, such as specificity, sensitivity, linearity, precision, accuracy, ruggedness, robustness and system suitability were performed. The framework was linear with a correlation co-efficient of 0.9945. %RSD of system and method precision were found to be 1.14 and 1.13. The LOD & LOQ for curcumin was found to be 0.2 µg/ml and 0.65 µg/ml.

Keywords: Curcumin, Mehagni, RP-UFLC, Anti-Diabetic Herbal Formulation.

Received: 5 July 2014, Revised: 20 July 2014, Accepted: 30 July 2014, Available online: 10 October 2014
Pharmacognostical Investigation of *Indigofera Barberi Gamble* (Fabaceae) – A Threatened Medicinal Herb

Srinivasan.N and Sathyanarayana.D

Department of Pharmacy, Faculty of Engineering and Technology, Annamalai University, Chidambaram, Tamil Nadu, India.608001

**ABSTRACT**

**Plan:** A preliminary Pharmacognostical study on the leaves and stems of *Indigofera barberi* Gamble

**Methodology:** The *Indigofera barberi* Gamble leaves and stems were collected, in the forest regions of Thalakona (Nelakona regions) of Chittoor district, Andhra Pradesh, India in the month of November. The collected drug were dried and studied to determine various Pharmacognostical parameters such as macroscopy, microscopical characters of leaf and stems including its powder microscopical characters. The shade dried powder and various solvent extracts (viz., petroleum ether, chloroform, dichloromethane ethanol and water) have been analysed for their phytochemicals, behaviour of powder with different chemical reagents and fluorescence characters.

**Outcome:** The data generated for the Pharmacognostical evaluation on *Indigofera barberi* Gamble leaves and stems. The results may be useful as a reference material in the preparation of standard monograph.

**Keywords:** *Indigofera barberi*, stem, leaf, histological, powder microscopy.

Received: 1 July 2014, Revised: 20 July 2014, Accepted: 30 July 2014, Available online: 10 October 2014


Bioavailability Enhancement of Ziprasidone: Optimization of Carriers and Methods Employed

Murthy S N Varanasi 1, John S2, Srikar G1, Radha Madhavi B1

1. Department Of Pharmaceutics, University College Of Pharmaceutical Sciences, Acharya Nagarjuna University, Nagarjuna Nagar, Guntur
2. Department Of Pharmaceutics, Nirmala College of Pharmacy, Atmakur, Guntur

**ABSTRACT**

**Plan:** The main objective of the present research work was to enhance the dissolution rate of Ziprasidone by preparing the solid dispersions using different carriers like PVP, PEG 4000, SSG and β-Cyclodextrin.

**Preface:** Ziprasidone is a class-II drug according to Biopharmaceutical Classification System. It is practically insoluble in water and it has dissolution limited bioavailability. So, the present research work it is aimed to improve the dissolution rate through solid dispersion technique which further enhances the bioavailability.

**Methodology:** The solid dispersions were prepared at three ratios (1:1, 1:2 & 1:3) of each carrier by three different techniques viz. Physical mixtures, Kneading method and Solvent evaporation method. The characterizations of prepared solid dispersions were done by Differential Scanning Calorimetry (DSC) and they were also characterized for their drug content and in-vitro dissolution studies

**Outcome:** From DSC studies it was confirmed that the drug was dispersed in the carrier at molecular level in the obtained co-evaporates. From the results of dissolution studies, it was confirmed that the solid dispersions could enhance the bioavailability of Ziprasidone.

**Key Words:** Ziprasidone (ZPR), Solid dispersions, Co-evaporates, Bioavailability

Received: 12 August 2014, Revised: 10 September 2014, Accepted: 15 September 2014, Available online: 10 October 2014
Autophagy: A Janus-Faced Role in Inflammation and Cancer
Mohannad A. Elkhider and Bob Chaudhuri

De Montfort University, The Gateway, Leicester, LE1 9BH United Kingdom

ABSTRACT

Plan: This review focuses on the role of autophagy, in up regulation, in the innate and adaptive immune response, in controlling carcinogenesis, and in supporting neuronal cell growth, development & remodeling. Also the review covers the therapeutic interventions involved in the cancer management through autophagy modulations.

Preface: Autophagy is a cellular degradative pathway where unwanted and weary cytosolic components are recycled. Any defects interfering with the integrity of the autophagic machinery would compromise the cell defenses leaving the cell susceptible to infection by circulating pathogens. Current literature points out that the dysregulation of autophagy may be associated with the genesis of cancer. Accumulation of aberrant organelles and proteins increases the chances of triggering an inflammatory microenvironment favoring chromosomal instability and mutagenesis. The aggregation of certain proteins yields cellular toxicity which eventually leads to cell death and neurodegeneration. Therefore, the autophagic duty of continuously monitoring and clearing out aggregated proteins is indispensable in neuronal cells.

Outcome: The accumulation of autophagosomes is an established assurance in a number of neurodegenerative diseases. However, this observation has triggered controversy whereas one opinion considers the activated autophagic pathway to act as an executioner by initiating neuronal cell death while the other explains the presence of autophagosomes as a final attempt by the cell to sustain viability against the increasing amount of stress.

Keywords: Autophagy, Cancer, Inflammation