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 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.
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madhu.divakar@gmail.com

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**Acknowledgment**

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

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Canadian Journal of Pharmaceutical Sciences- (Can J Pharm Sci)
Canadian Medical Association Journal- (Can Med Assoc J)
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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 Pharmacol Exp Ther)
Journal of Pharmacy and Pharmacology- (J Pharmacol Pharmacol)
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.)
• EDITORIAL : Indian Journals and the Tyranny of Impact Factor
• Skin Ageing and its Remedies: A review
• Preliminary study on the altered expression of 3β HSD gene in rat testis after Amlodipine and its modification by Asteracantha longifolia seed extract
• GC-MS Analysis of Bioactive components of Cordia retusa (Boraginaceae)
• Antibacterial Activity of Fruit of Careya arborea Roxb. (Lecythidaceae)
• Collection, Identification, Phytochemical analysis and Phyto toxicity test of Wood inhabiting Fungi Ganoderma lucidum (Curt.Fr.)P.Karst.
• An Analytical Study of the Essential Medicine list of Kerala and Tamil Nadu
• Studies on the Plant diversity of Muniandavar Sacred Groves of Thiruvayaru, Thanjavur, Tamil Nadu, India
• Formulation and Evaluation of Metaprolol tartarate Non-effervescent Gastric Floating tablets.
• Observations on the Quality of commercially manufactured Ayurvedic Decoction, Maharasnadi Kvatha.
• Toxicokinetic and Tissue distribution studies of Mercury in an Ayurvedic preparation- Shila Sindur
• Wrightia tinctoria (Roxb) R.Br. - An updated Review
• Medicinal Plants with antioxidant Potential: A review.
• Propolis non-volatile constituents: A Review
• An Inclusive Indian National Therapy.
There was a time when fairly descriptive accounts were considered good enough to evaluate people, situations and outcomes. But not anymore! The clamour for transparency, accountability and equal opportunity have increased the democratic burden in the dispensation of justice. In India, for instance, it has become essential to rank a candidate’s entrance examination scores down to the second or third decimal for allotting a medical seat.

Such absurd demands for accuracy in day to day transactions brings to my mind a good friend of mine, back home in my village, who depended on agriculture for his livelihood. He used to sport a curious vintage HMT watch, (analog of course) with only the hour hand. For some reason, he had not bothered to replace the broken minute hand. When I asked him why, he said that minutes do not matter to a farmer. “We think in seasons... I do not even need a watch. A calendar is more than enough to work in the farm” 

MK Unnikrishnan.

Indian Journals and the Tyranny of Impact Factor


Plan: This review mainly focus on various mechanisms and treatment strategies for skin ageing.
Preface: Skin ageing is a complex biological phenomenon consisting of extrinsic ageing and intrinsic ageing. The process of extrinsic ageing commonly called photo aging, involves changes in cellular biosynthetic activity which leads to gross disorganisation of the dermal matrix whereas intrinsic skin ageing of skin derived cells.
Outcome: The paper highlights strategies for treatment of skin ageing which causes reduction in proliferative capacity leading to cellular senescence, and altered biosynthetic activity.

Keywords: Skin ageing, Intrinsic, Extrinsic, Radiations, Free radicals.

Preliminary study on the altered expression of 3β HSD gene in rat testis after Amlodipine and its modification by Astercantha longifolia seed extract

Shini Dominic†* and V. Padmaja†

1. College of Pharmaceutical Sciences, Medical College, Kozhikode, Kerala, India 673008.
2. College of Pharmaceutical Sciences, Medical College, Thiruvananthapuram, Kerala, India 695011.

Article history: Received: 11 November 2013, revised: 10 January 2014, accepted: 17 February 2014, Available online: 3 April 2014

Plan: To verify the effect of Amlodipine on 3β HSD gene expression in rat testis and its modification upon stopping the drug / co administration of Astercantha longifolia seed extract.

Preface: Though a few data are available on the potential of Amlodipine to adversely affect and that of Astercantha longifolia seeds to potentiate the male reproductive parameters, no studies are available on the effect of these on gene expression.

Methodology: Different groups of rat were treated orally with Amlodipine and Amlodipine plus Astercantha longifolia seed extract. After treatment the Amlodipine treated group was kept untreated for recovery. Finally total RNA from all groups were extracted and PCR for 3β HSD gene was performed and products were analyzed by gel electrophoresis.

Outcome: Amlodipine treated groups showed down regulation of 3β HSD expression but the same could be reversed after the recovery period of about 67 days. In groups treated with Amlodipine and Astercantha longifolia seed extract, 3β HSD expression was up regulated in a dose dependent manner. It may be concluded that as 3β HSD is involved in the conversion of cholesterol to testosterone, the decrease / increase in testosterone level may be due to the down / up regulation of 3β HSD expression.

Key words- Amlodipine, Astercantha longifolia, 3β HSD gene

Murugesan Amudha*, and Shanmugam Rani .GC-MS Analysis of Bioactive components of Cordia retusa (Boraginaceae).

Department of Pharmacy, FEAT, Annamalai University, Annamalai Nagar- 608 002, Chidambaram, Tamil Nadu, India.

Article history: Received: 5 December 2013, revised: 25 January 2014, accepted: 12 February 2014, Available online: 3 April 2014

Plan: The present study is structured to analyse the chemical constituents of the plant Cordia retusa (vahl.), belongs to the family Boraginaceae using GC-MS.

Methodology: The ethanolic crude extract of aerial part of plant C. retusa was analyzed. The GC Clarus 500 (Perkin Elmer) used in the investigation employed a column packed with Elite- 5MS (5%Diphenyl / 95% Dimethyl poly siloxane, 30mm x 0.25mm x0.25µmdf) and the components were separated using Helium (1mL/min) as the carrier gas. The 2 µl sample extract injected into the instrument was detected by the Turbo mass gold detector (Perkin Elmer) with the aid of the Turbo mass 5.2 software.

Outcome: Qualitative analysis of ethanolic crude extract of C.retusa by using GC MS showed that the presence of fourteen different phytochemical compounds. The components were recognized by comparing their retention time and fragmentation patterns with those data stored in the National Institute of Standard and Technology (NIST) library. The reported chief constituents are Alpha Amyrin, (1H) Naphthalenone, 3,5,6,7,8,8a-hexahydro-4,8a-dimethyl-6-(1-methylethenyl)- and 9,19-Cycloergost-24(28)-en-3-ol, 4,14-dimethyl-acetate, (3α,4α,5α).

Keywords: Cordia retusa (vahl.), GC-MS, NIST, Secondary metabolites
Plan: The present study was planned to investigate the antibacterial activity of ethyl acetate, ethanol and hexane extracts of the fruits of Careyaarborea Roxb.

Methodology: Agar diffusion assay was carried out using the extracts.

Outcome: All the tested bacterial strains viz., Escherichia coli, Salmonella typhimurium, Listeria monocytogenes, Staphylococcus aureus and Staphylococcus epidermidis) were found to be sensitive to all the 3 concentrations of ethyl acetate and ethanolic extracts of fresh and dry fruit, in ascending order.

Keywords: Careya arborea, antibacterial activity, Lecythidaceae
Collection, Identification, Phytochemical analysis and Phyto toxicity test of Wood inhabiting Fungi *Ganoderma lucidum* (Curt.Fr.)P.Karst.

M.Nithya* V.Ambikapathy and A.Panneerselvam.

P.G and Research Department of Botany and Microbiology, A.V.V.M Sri Pushpam College (Autonomous), Poondi-613 503, Thanjavur, Tamilnadu, India.

Article history: Received: 18 November 2013, revised: 10 December 2013, accepted: 11 January 2014, Available online: 3 April 2014

Plan: In this study 10 strains of mushroom *Ganoderma lucidum* were collected from various places and decided to screen their phytotoxicity activity and phytochemical constitution.

Preface: The popular mushroom *Ganoderma lucidum* (Reishi) was a bracket fungus and has been widely used for the promotion of health and longevity in Asian countries. The dried powder of *G. lucidum* was popular as a cancer chemotherapy agent in ancient China. *G. lucidum* clearly demonstrates anticancer activity in experiments with cancer cells and has possible therapeutic potential as a dietary supplement or alternative therapy for breast and prostate cancer. And also the fruiting bodies of *Ganoderma lucidum* (Polyporaceae) are a well known Chinese crude drug identified as a phytotoxic agent. However, since *G. lucidum* was available from different sources, it is advisable to test its biological activity.

Methodology: *G. lucidum* strains collected was isolated and identified with potato dextrose agar medium. Then the secondary metabolites were qualitatively studied through phytochemical analysis.

Outcome: Significant root length inhibition was observed at 100ppm and 200ppm. Similarly seed germination was also significantly inhibited at the concentration 100ppm and 200ppm extracts. The mean data of root length inhibition by ethanol extract in 100ppm was 0.393 and 0.208 in 200ppm. Likewise the mean data of seed germination inhibition by ethanol extract in 100ppm was 15 and 0.208 in 200ppm. Overall results supported that *Ganoderma lucidum* clearly supported the wider medicinal uses and established its anticancer activity.

Key words: Bracket fungus, *Ganoderma lucidum*, Phytochemicals, Radish seed, Seed Germination, Phytotoxicity.
Hygeia.J.D.Med.6 (1) 2014; 48-62.

Studies on the Plant diversity of Muniandavar Sacred Groves of Thiruvaiyaru, Thanjavur, Tamil Nadu, India.

J.Jayapal1, A.C.Tangavelou2, and A.Panneerselvam1
1. P.G. Research Dept. of Botany and Microbiology, A.V.V.M. Sri Pushpam College (Autonomous), Poondi-613503 Thanjavur (Dist.). Tamil Nadu, India.
2. Bio-Science Research Foundation, Pondicherry, India-605 010.

Article history: Received: 18 October 2013, revised: 10 November 2013, accepted: 10 January 2014, Available online: 3 April 2014

Plan: Muniandavar Sacred Groves from Vaduvakudi at Thiruvaiyaru Taluk, Thanjavur district of Tamil Nadu was selected for floristic exploration to know the plant diversity of the vegetation, the availability of rare and endangered floras, the ecological significance, regeneration status and the anthropogenic pressures, to document the religious beliefs and spirituality and the participation of locals on conservation.

Outcome: In the present study, the flora of Muniandavar Sacred Groves comprises about 180 plant species belonging to 158 genera and 75 plant families, Key stone species available in the Sacred groves includes Anacardium occidentale, Borassus flabellifer, Ficus benghalensis that harbors a number of birds and other survival of many other species. Muniandavar sacred grove is in good vegetation status and the conservationists should take necessary action to protect this grove from plastic pollution. An environmental awareness programme is planned to conduct for the local people in order to safeguard this sacred grove from pollution.

Keywords: Sacred groves, Medicinal Plant, Anthropogenic Pressure, Key Stone species, Conservation.

DOI: 10.15254/H.J.D.Med.6.2014.122

Hygeia.J.D.Med.6 (1) 2014; 63-73.

Formulation and Evaluation of Metaprolol tartarate Non-effervescent Gastric Floating tablets
Bharat W Tekade*, Vinod M Thakare, Umesh T Jadhao, Sandeep B Khatale
Department of Pharmaceutics, TVES's Honorable Loksevak MadhukarRao Chaudhari College of Pharmacy, Faizpur, India.

Article history: Received: 1 January 2014, revised: 24 February 2014, accepted: 10 March 2014, Available online: 3 April 2014

Plan: The objective of this study was to develop Gastric floating drug delivery system containing Metoprolol and having a bulk density lower than that of gastric fluid remaining buoyant on the stomach contents.

Preface: Metoprolol tartarate is having short to moderate half life 3-7 hrs, low bioavailability hence it is worth able to formulate Metoprolol in floating drug delivery. The GRDDS can improve the controlled delivery of the drugs which exhibit an absorption window by continuously releasing the drug for a prolonged period before it reaches its absorption site, thus ensuring its optimal bioavailability

Methodology: Percentage drug content in all floating tablet formulations was found to be 95.85% to 103.33% which was within Pharmacopoeial limit. In- vitro drug release profile from all formulations (F1-F10) showed sustained release of Metoprolol Tartarate over a period of 10 hours.

Outcome: Among all the formulation, F3 showed drug release up to 94.71% at the end of 10 hours. The mechanism of the drug release from F3 was anomalous transport, first order release kinetics. Stability studies on optimized batch showed no significant effect on physical properties, drug content, floating behavior and drug release.

Keywords: Gastro retentive floating tablets, Buoyancy, Metaprolol Tartarate, HPMC, Kinetic studies.

Observations on the Quality of commercially manufactured Ayurvedic Decoction, Maharasnadi Kvatha.

A.Radha, Jessy Sebastian, Manjima Prabhakaran and D. Suresh Kumar*
Confederation for Ayurvedic Renaissance-Keralam Ltd., KINFRA Small Industries Park, Nalukettu Road, KINFRA Park P.O., 680 309, Koratty, Trichur District, Kerala, India.

Article history: Received: 23 December 2013, revised: 20 January 2014, accepted: 18 February 2014, Available online: 3 April 2014

Plan: Ayurveda makes use of many Kvatha or hot infusions. In olden days the physician provided a handwritten recipe of the Kvatha in question and patients prepared these medicines at home. However, this tradition ended with the advent of commercial manufacture of Ayurvedic medicines in Kerala since 1902. Considering the growing popularity of Ayurveda, an attempt was made to compare the quality of seven brands of Maharasnadi Kvatha, a formulation that is widely recommended by physicians.

Methodology: Seven brands of Maharasnadi Kvatha available in the local market were procured. Their pH, total dissolved solids, sodium benzoate content, HPTLC profiles and microbial load were measured. Additionally, the presence of alkaloids, tannins, phenols, and sterols was detected qualitatively. Total tannins, alkaloids, phenols and sterols were estimated.

Outcome: The colour of the seven brands, their pH, total dissolved solids, sodium benzoate content, HPTLC profiles, microbial load and content of compound classes showed wide variation. HPTLC fingerprinting can serve as a useful technique to assess the quality of Ayurvedic medicines. The number of bands and their area percentages can serve as quality indices. Such methods can be used for improving the quality of Ayurvedic medicines.

Keywords: Ayurveda, Quality control, hot infusion, HPTLC


Hygeia.J.D.Med.6 (1) 2014; 81-94.
Toxicokinetics and Tissue distribution studies of mercury in Ayurvedic preparation- Shila Sindur Challa Srinivas Reddy1*, Umamahesh Balekari2, Vemu Priyanka3, Jinugu Vidya Sagar4
1. Department of Pharmacognosy, Vaagdevi college of Pharmacy, Hanamkonda, India
2. Department of Pharmacognosy, University College of Pharmaceutical Sciences, Kakatiya University, Hanamkonda, 3. Andhrapradesh, India
4. Department of Pharmacology, Vaagdevi College of Pharmacy, Hanamkonda, Andhrapradesh, India.
5. Relisys Medical Devices Ltd, Hyderabad, Andhra Pradesh India.

Article history: Received: 5 December 2013, revised: 25 January 2014, accepted: 12 February 2014, Available online: 3 April 2014

Plan: Shila sindur, an ayurvedic preparation containing mercury as chief ingredient was investigated for toxicokinetics and tissue distribution studies in laboratory animals.

Methodology: Shila Sindur at three doses i.e., 50 mg/kg, 300 mg/kg and 1000 mg/kg was studied. Single and repeated dose administration was used for toxicokinetics and tissue distribution studies, respectively and evaluated by using toxicokinetic and tissue distribution parameters.

Outcome: Toxicokinetics studies revealed low plasma clearance with high half life, this correlates with higher affinity of mercury to plasma proteins. Higher doses showed wide distribution by increased area under curve and volume of distribution. A dose dependent elevation in mercury concentrations and organ damage was found in kidneys followed by liver, lungs, spleen and brain. At higher doses, shila sindur found toxic, at moderate doses stringent monitoring was recommended for use. Present study concludes that low dose Shila sindur was found safe in terms of toxicological and tissue distribution patterns.

Key words: Shila sindur, toxicokinetics, tissue distribution, mercury

Wrightia tinctoria (Roxb) R.Br. - An updated Review.

S. Lakshmi Devi1* and Madhu.C.Divakar2

1. College of Pharmacy, SRIPMS, 395, Sarojini Naidu Road, Coimbatore - 641 044, Tamilnadu, India.
2. Directorate of Pharmaceutical Affairs and Drug Control, Ministry of Health, Muscat, Oman

Article history: Received: 20 December 2013, revised: 12 January 2014, accepted: 10 February 2014, Available online: 3 April 2014

Plan: The present study aims to facilitate an updated phytochemical and pharmacological activity study reports of various researchers pertaining to the plant Wrightia tinctoria.

Preface: Wrightia tinctoria (Roxb.) R. Br (Apocynaceae) is widely distributed in the plains and slopes of Shevaroy hills of Yercaud Town, situated in Salem district, Tamilnadu. Wrightia tinctoria is extensively used in a number of traditional medicines.

Outcome: Chemical constituents isolated from different parts of the plant W. tinctoria and their biological activities reported are summarised in this review.

Key words: Wrightia tinctoria. Biological activities, Phytoconstituents


Medicinal Plants with antioxidant Potential: A review.

Khaled Rashed
Pharmacognosy Department, National Research Centre, Dokki, Giza, Egypt.

Article history: Received: 14 November 2013, revised: 20 December 2014, accepted: 11 January 2014, Available online: 3 April 2014

Plan: This review deals with the antioxidant potential of some medicinal plants.

Methodology: Plants contain a wide variety of free radical scavenging molecules, such as polyphenols, dietary glutathione, vitamins and endogenous metabolites. An attempt has been made in this review to identify the major medicinal plants with antioxidant activity.

Outcome: We provide information concerning the complete profile of 18 selected medicinal plants on their antioxidant activity.

Keywords: Medicinal plants, antioxidant activity, phytochemicals.

Propolis non-volatile constituents: A Review

Konstantinos M. Kasiotis
Benaki Phytopathological Institute, Laboratory of Pesticides Toxicology, 8 St. Delta Street, Athens, Kifissia 14561, Greece

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Plan: This study includes the characteristics and variation of non volatile constituents in propolis samples collected from different regions of the world. The review covers the research activities after 2010 on propolis constituents.

Outcome: Propolis constitutes a complex resinous material collected by honeybees serving as a defense system for their hives. Apart from this evident natural use, propolis is marketed by the pharmaceutical industry due to its claimed beneficial effects on human health such as antioxidant, antibacterial, antiviral and anticancer activities. These properties are attributed to the chemical compounds that are found in propolis mainly phenolic compounds and terpenes. In this review article the analysis of non-volatile compounds of propolis performed by high performance liquid chromatography (HPLC) coupled with various detectors, will be presented. Future trends and further insights are quoted and commented.

Key words: Non volatile constituents, Propolis.

An inclusive Indian national therapy

Prof. P. Velayudha Panicker
Former Professor of Pharmacognosy, College of Pharmaceutical Sciences, Medical College, Thiruvananthapuram, Kerala, India, 695011.

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Abstract
A road map to bring Patient-oriented clinical results of ethnic traditional processes & techniques through a single window of modern hospitals for documentation and accountability where ‘clinical Pharmacognosist’ has a link role between MCI and AYUSH to evolve an “inclusive health care policy” for the nation.

Key words: clinical results of ethnic traditional processes, documentation, Clinical Pharmacognosist, MCI, AYUSH, PCI, CCIM, JAMA, NCHRH, AICTE