3.2.1. ***Number of papers published per teacher in the Journals notified on UGC website during the year***

QnM

3.2.1.1. Number of research papers in the Journals notified on UGC website during the year

Year	2022 - 23	
Number	33	

DIRECTOR CUM PRINCIPAL
LAUREATE INSTITUTE OF
PHARMACY KATHOG
TEH. JAWALAMUKHI
DISTT. KANGRA (H.P.)

3.2.1 Number of Paper published per teacher in the journals notified on UGC website during the year

S. No.	Title of Paper	Name of Authors	Department of teacher	Name of Journal	Year of Publication	ISSN No.	Link to the recognition in UGC enlistment of the Journal
1	A New Approach for Ovarian Cancer Management	Darsh Gautam, Poonam Thakur, Sanjay Kumar	Pharmacognosy	YMER	2023	0044-0477	http://ymerdigital.com
2	Volatile Alkaloids and Brain Disorder Investigation of the Cognitive and Mood Effects of Zingiberofficinale Essential oil with In Vitro properties relevant to central Nervous System Function	Sharavan Kumar Paswan, Dharmendra Ahuja, Lucky Mohapatra, Sanjay Kumar	Pharmacognosy	Journal of Pharmaceutical Negative Results	2023	0976-9234	https://www.pnrjournal.com
3	RP-HPLC-Based Bioanalytical Approach for Simultaneous Quantitation of Cinnarizine and Domperidone in Rat Plasma	Mohit Vij, Neha Dand , Lalit Kumar , Amardeep Ankalgi , Pankaj Wadhwa 1,*, Sultan Alshehri , Faiyaz Shakeel , Mohammed M. Ghoneim , Prawez Alam and Shahid Ud Din Wani	Pharmaceutical Analysis & Quality Assurance	MDPI	2023	2297-8739	Separations | An Open Access Journal from MDPI
4	Standardization and Evaluation of Herbal Extract containing Borago officilinails for its Anti-Microbial Activity	Archana Kumari, Diksha Sharma, Kamal Jeet, Sanjay Kumar	Pharmacognosy	Journal for Basic Sciences	2023	1006-8341	https://fzqxjckxxb.com
5	A Review on Bio-analytical Techniques of Anti HIV Drugs	Sanjay Kumar, Darsh Gautam, Poonam Thakur, Poonam dogra, Babita Patial, Rekha Rana	Pharmacognosy	Journal for Basic Sciences	2023	1006-8341	https://fzqxjckxxb.com
6	A Review on Achyranthes Aspara	Anchal Gangotia, Prince Thakur, Arti Devi, Amardeep Ankalgi	Pharma chemistry	Journal for Basic Sciences	2023	1006-8341	https://fzqxjckxxb.com
7	A Review on Medicinal Potential of Zingiber Officinale	Kiran Thakur, Sanjay Kumar	Pharmacognosy	YMER	2023	0044-0477	http://ymerdigital.com

DIRECTOR CUM PRINCIPAL
LAUREATE INSTITUTE OF
PHARMACY KATHOG
TEH. JAWALAMUKHI
DISTT. KANGRA (H.P.)

8	Phytochemical Screening and Antioxidant Activity of Leaves Alpinia Galangal	Diksha Sharma, Archana Kumari, Kamal Jeet, Sanjay Kumar	Pharmacognosy	Journal for Basic Sciences	2023	1006-8341	https://fzqxjckxxb.com
9	Silymarin: A Phytoconstituent with signiifcant therapeutic potential-A Narrative Review	Sahil Sharma, Pravin Kumar, Mahendra Singh Asahwat, Vinay Pandit, Chandrapal Singh Verma, Dinesh Kumar Sharma	Pharmaceutics	Current Drug Therapy	2023	2212-3903	https://www.eurekaselect.com/article/128465
10	Microemulsion as an emerging approach for drug delivery of therapeutics	Vivek Sharma, Ritik Chaudhary, Rahul Kumar, M S Ashawat, Pravin Kumar, Himanshu Sharma, Priyanka Sharma	Pharmaceutics	Journal for Basic Sciences	2023	1006-8341	https://fzqxjckxxb.com
11	The Role of Gymnema Sylvestre in the management of Diabetes	Ritik Chaudhary, Rahul Kumar, Vivek Sharma, Pravin Kumar, M S Ashawat	Pharmaceutics	Journal for Basic Sciences	2023	1006-8341	https://fzqxjckxxb.com
12	Exploring treatment options for Rheumatoid Arthritis: A comprehensive review of Herbal & Synthetic therapies	Sidhant Sharma, Balwinder Singh, Kiran Bala, Anshul Thakur, Manisha, Shiv Kumar Kushawaha, M S Ashawat	Pharma chemistry	Journal for Basic Sciences	2023	1006-8341	https://fzqxjckxxb.com
13	Recent Trends in Nanocarriers for the Management of Atopic Dermatitis	Pravin Kumar, Mahendra Singh Ashawat, Vinay Pandit, Chandrapal Singh Verma, Amardeep Ankalgi, Manish Kumar	Pharmaceutics	Pharmaceutical Nanotechnology	2023	2211-7393	https://www.eurekaselect.com/article/130540
14	Role of Quinazoline in Biological activity: A Review	Manoj kumar,Sumit kumar, Dinesh kumar, Suresh kumar and Deepti sharma	Pharamacology	European journal of Bulletin	2023	2063-5346	http://ymerdigital.com
15	Pharmaceutical application and structural inside into the fused derivative of pyrimidine	Manoj kumar,Sumit kumar, Dinesh kumar, Suresh kumar	Pharmacology	European journal of Bulletin	2023	2063-5346	https://www.eurchembull.com
16	Overview of Thiazole and their derivative having antimicrobial activityDerivative having anti microbial activity	Manoj kumar,Sumit kumar, Dinesh kumar, Suresh kumar	Pharmacology	European journal of Bulletin	2023	2063-5346	https://www.eurchembull.com

DIRECTOR CUM PRINCIPAL
LAUREATE INSTITUTE OF
PHARMACY KATHOG
TEH. JAWALAMUKHI

17	Assessing the efficacy of various polymer in the formulation of effervescent floation tablet for enhancing the release of diclofenac sodium in gastro intestinal tract	Shiv kumar, Simran choudhary,shad ahmed,Sweta sharma	Pharmacology	European journal of Chemical Bulletin	2023	0022-2860	Journal of Molecular Structure | ScienceDirect.com by Elsevier
18	Development and standardization of Herbal formulation of medicinal plant Berberis vulgaris	Diksha Sharma, Kamal Jeet, Sanjay Kumar	Pharmacognosy	Journal of Basic science	2023	1006-8341	https://fzqxjckxxb.com
19	Development of Efficient Analytical method for the multicomponent analysis of Pravastatin Sodium and Nebivolol Hydrochloride in Bulk Drug by RP-HPLC	Shivani Sharma*, Amar Deep Ankalgi , Arti Devi ,Mahendra Singh Ashawat	Pharmaceutical Analysis & Quality Assurance	Research J. Pharm. and Tech.	2023	0974-3618	RJPT - Research Journal of Pharmacy and Technology (rjptonline.org)
20	1,3- thiazole derivatives: A Scaffold with considrable potential in the treatment of Neurodegenerative disease	Jasmine choudhary,Akash jain,Aditi kaushik	Pharmaceutical chemistry	Benthem science	2023	1568-0266	https://pubmed.ncbi
21	Terpenoids in diabetic Nephropathy : Advances and Therapeutic opportunities	Aditi kaushik	Pharmaceutical chemistry	Benthem science	2023	1568-0266	https://pubmed.ncbi

DIRECTOR CUM PRINCIPAL
LAUREATE INSTITUTE OF
PHARMACY KATHOG
TEH. JAWALAMUKHI
DISTT. KANGRA (H.P.)

IF = 0.1.

YMER || ISSN : 0044-0477

http://ymerdigital.com

A NEW APPROACH FOR OVARIAN CANCER MANAGEMENT

[1*]Dr. DARSH GAUTAM, [2]Mrs. POONAM TALWAN, [3]Dr. SANJAY KUMAR, [4]Dr. GAURAV JOSHI, [4]Ms. NAVNI SHARMA, [5]Mr. SAHIL KUMAR, [2]Ms. KAJAL JOSHI

[1]Associate Professor, Himachal Institute of Pharmaceutical Education & Research, Bela, Nadaun, HP-177033 India.

[2]Assistant Professor, Himachal Institute of Pharmaceutical Education & Research, Bela, Nadaun, HP-177033 India.

[3]Associate Professor, Laureate Institute of Pharmacy, Kathog, Kangra, HP-176041 India.

[4]Assistant Professor, University Institute of Pharmaceutical Sciences: Chandigarh University, Punjab-140413, India.

[5]Research Scholar, Himachal Institute of Pharmaceutical Education & Research, Bela, Nadaun, HP-177033 India.

Corresponding Author

Dr. Darsh Gautam,
Associate Professor,
Himachal Institute of Pharmaceutical Education & Research,
Bela, Nadaun, H.P. – 177033, India.

ABSTRACT

Ovarian Cancer (OC) is associated with reduction in quality of life, which can affect physical, functional, social and sexual well being. The main cause of mortality for women due to ovarian cancer. The main treatment for women with OC is surgical cytoreduction, which is followed by adjuvant chemotherapy for high-risk cancers. Nanotechnology is a multidisciplinary field, which includes a broad range of products generated from chemistry, physics, biology, and pharmaceutical industries. To transport anticancer medication to tumours efficiently and perhaps enhance cancer treatment, nanocarriers are commonly employed. These carriers can essential in the fight against ovarian cancers. Among the most popular carriers for the targeted delivery of anticancer drugs of OC are organic nanoparticles like lipid and polymeric nanoparticles, whereas inorganic nanoparticles such as metallic nanoparticles.

Keywords: Ovarian cancer, Nano carriers, polymeric nanoparticles, metallic nanoparticles.

Volatile Alkaloids And Brain Disorder Investigation Of The Cognitive And Mood Effects Of Zingiber Officinale Essential Oil With In Vitro Properties Relevant To Central Nervous System Function

[1]SHRAVAN KUMAR PASWAN, [2]PROF. Dr. DHARMENDRA AHUJA, [3]Dr. LUCY MOHAPATRA, [4]Dr. SANJAY KUMAR, [5]MOHAMMAD MUZTABA, [6]AHTESHAM AHMAD, [7]P. SELVAKUMAR, [8]SHAHEEN ANSARI, [9]AZRA AISHA, [10]KRISHAN MAURYA, [11]ROSHAN KUMAR

[1]Amity Institute of Pharmacy, Amity University Uttar Pradesh, Lucknow Campus Lucknow, Gomati Nagar Extension, Lucknow-226010, Uttar Pradesh, India.

[2]Dean, Faculty of Pharm. Sc. Jayoti Vidyapeeth Women's University, Jaipur, Rajasthan, INDIA.

[3]Amity Institute of Pharmacy, Amity University Uttar Pradesh, Lucknow Campus Lucknow, Gomati Nagar Extension, Lucknow-226010, Uttar Pradesh, India.

[4]Associate professor, Department of Pharmacognosy, Laureate institute of pharmacy, VPO Kathog teshil Dehra Distt Kangra Himachal Pradesh, Pin 176031

[5]Associate Professor, Praduman Singh College Of Pharmacy Phutahiya Sansarpur Basti Uttar Pradesh, Pin code: 272001.

[6]Assistant Professor, Faculty of Pharmacy, Integral University, Kursi Rd, Lucknow, Uttar Pradesh 226026.

[7]Associate Professor, Department of Chemistry, Dhaanish Ahmed Institute of Technology, Coimbatore 641105, Tamilnadu, India.

[8]Assistant Professor, Jahangirabad Institute of technology, barabanki, Uttar Pradesh

[9]Associate Professor, Era college of pharmacy Era University Sarfarazganj Lucknow Pin code: 226003.

[10]Assistant Professor, SBS College Of Pharmacy ,Bhujgi Ambedkar Nagar Uttar Pradesh Pin code: 224149.

[11] Assistant Professor, Department of Pharmacology, Guru Nanak College of Pharmaceutical Sciences, Dehradun, 248007, Uttarakhand, INDIA.

Corresponding Author:

Roshan Kumar

Assistant Professor, Department of Pharmacology, Guru Nanak College of Pharmaceutical Sciences, Dehradun, 248007, Uttarakhand, INDIA.

DOI: 10.47750/pnr.2023.14.02.72

Abstract

As the human life expectancy increases, age-linked diseases have become more and more frequent. The worldwide increment of dementia cases demands medical solutions, but the current available drugs do not meet all the expectations. Recently the attention of the scientific community was attracted by natural compounds, used in ancient medicine, known for their beneficial effects and high tolerability. All these evidences suggest a potential role of the compounds of ginger not only in the treatment of the disease, but also in its prevention.. Ginger (Zingiber officinale Roscoe) is a common and widely used spice. It is rich in various chemical constituents, including phenolic compounds, terpenes, polysaccharides, lipids, organic acids, and raw fibers. The health benefits of ginger are mainly attributed to its phenolic compounds, such as gingerols and shogaols. This review is focused on Ginger (Zingiber officinale) and explore its properties against Alzheimer Disease and Vascular Dementia, two of the most common and devastating forms of dementia. This work resumes the beneficial effects of Ginger compounds, tested in computational in vitro and in vivo models of Alzheimer's Disease and Vascular Dementia, along with some human tests.

Keywords: Ginger, Neuro disease, Phytochemical, Antioxidant

separations

MDPI

IF = 2.6 (2)

Article

RP-HPLC-Based Bioanalytical Approach for Simultaneous Quantitation of Cinnarizine and Domperidone in Rat Plasma

Mohit Vij [1,2], Neha Dand [3], Lalit Kumar [4], Amardeep Ankalgi [5], Pankaj Wadhwa [1,*], Sultan Alshehri [6], Faiyaz Shakeel [6], Mohammed M. Ghoneim [7], Prawez Alam [8] and Shahid Ud Din Wani [9]

1 School of Pharmaceutical Sciences, Lovely Professional University, Phagwara 144411, Punjab, India
2 Government Pharmacy College, Kangra 176047, Himachal Pradesh, India
3 Bharati Vidyapeeth's College of Pharmacy, Navi Mumbai 400614, Maharashtra, India
4 Sri Sai College of Pharmacy, Amritsar 143149, Punjab, India
5 Laureate Institute of Pharmacy, Kangra 176031, Himachal Pradesh, India
6 Department of Pharmaceutics, College of Pharmacy, King Saud University, Riyadh 11451, Saudi Arabia
7 Department of Pharmacy Practice, College of Pharmacy, AlMaarefa University, Ad Diriyah 13713, Saudi Arabia
8 Department of Pharmacognosy, College of Pharmacy, Prince Sattam Bin Abdulaziz University, Al-Kharj 11942, Saudi Arabia
9 Department of Pharmaceutical Sciences, School of Applied Science and Technology, University of Kashmir, Srinagar 190006, Jammu and Kashmir, India
* Correspondence: pankaj.23400@lpu.co.in

Abstract: An accurate, precise and sensitive reverse-phase high-performance liquid chromatography (RP-HPLC) bioanalytical approach was developed for the simultaneous estimation of cinnarizine (CIN) and domperidone (DOM) in rat plasma using irbesartan (IRB) as an internal standard (IS). The proposed RP-HPLC approach was validated as per the latest ICH M10 guidelines. The analytes (CIN and DOM) and IS were extracted from plasma samples using the protein precipitation strategy. Chromatographic separation is accomplished by a C_{18} Sunfire™ (5 µm, 250 mm × 4.6 mm) analytical column, using an isocratic mobile phase consisting of acetonitrile-methanol in 30:70 proportions at a flow rate of 1 mL/min. The detection of all three constituents was recorded at a wavelength of 270 nm with a UV detector. DOM, CIN and IS were eluted at 3.2, 4.5 and 6.1 min, respectively, utilizing a total run time of 10 min. The lower limit of quantification (LLOQ) was 5 ng/mL for CIN and DOM in rat plasma. The proposed RP-HPLC approach was linear in the 5–200 ng/mL range for CIN and DOM. The recovery of the method was greater than 95%, and the relative uncertainty was less than 2%, indicating that the proposed bioanalytical approach was accurate and precise. The limit of detection was established as 1.1 ng/mL for CIN and 1.7 ng/mL for DOM. The created approach was found to be robust and passed all validation criteria; thus, the proposed RP-HPLC approach can be employed successfully for the simultaneous assessment of CIN and DOM in rat plasma.

Keywords: bioanalytical method validation; cinnarizine; domperidone; RP-HPLC; rat plasma

Citation: Vij, M.; Dand, N.; Kumar, L.; Ankalgi, A.; Wadhwa, P.; Alshehri, S.; Shakeel, F.; Ghoneim, M.M.; Alam, P.; Wani, S.U.D. RP-HPLC-Based Bioanalytical Approach for Simultaneous Quantitation of Cinnarizine and Domperidone in Rat Plasma. *Separations* **2023**, *10*, 159. https://doi.org/10.3390/separations10030159

Academic Editor: Victoria Samanidou

Received: 13 February 2023
Revised: 21 February 2023
Accepted: 23 February 2023
Published: 25 February 2023

1. Introduction

Cinnarizine (CIN) is a piperazine derivative with histamine H1-, dopamine D2- and calcium-channel-blocking activity [1,2]. In addition to treating vertigo/Meniere's disease, nausea, vomiting and motion sickness, it is also effective for vestibular symptoms due to other origins [2,3]. CIN inhibits vascular smooth muscle cell contractions by inhibiting L-type and T-type voltage-gated calcium channels [3]. CIN may alleviate motion sickness vomiting by binding to dopamine D_2 receptors, histamine H_1 receptors and muscarinic acetylcholine receptors [4]. It works by interfering with signal transmission between the inner ear's vestibular apparatus and the hypothalamus' vomiting center [4,5].

Domperidone (DOM) is a specific blocker of dopamine receptors with antiemetic and gastric prokinetic properties, which can be used to relieve motility disorders [6,7]. It is

ISSN NO : 1006-8341

"STANDARDIZATION AND EVALUATION OF HERBAL EXTRACT CONTAINING *BORAGO OFFICINALIS* FOR ITS ANTI-MICROBIAL ACTIVITY"

Archana Kumari[1*], Diksha Sharma[1], Kamal Jeet[2], Sanjay Kumar[3]

[1]Department of Pharmacognosy, Career Point University, Hamirpur

[2]Department of Pharmacognosy, Assistant Professor, Career Point University, Hamirpur

[3]Department of Pharmacognosy, Associate Professor, Laureate Institute of Pharmacy Kathog, Jawalamukhi, Himachal Pradesh

***Corresponding author:**
Archana Kumari
Roll No: H15421
M.Pharmacy, 4th Semester
Department of Pharmacognosy
Career Point University, Hamirpur-HP

ABSTRACT

The authenticated leaves of *Borago officinalis* were air dried and subjected to size reduction to get coarse powder. Then the powder of leaves of *Borago officinalis* was subjected to physicochemical characterization and quality control tests. Percentage yield after extraction with ethanol, the preliminary qualitative phytochemical study indicated the presence of carbohydrates, tannins, flavonoids, glycosides, alkaloids, phenols and tannins shown in Table no.1. ethanolic leaf extract of *Berberis vulgaris L.* were subjected to TLC studies which gives the remarkable separation of spot with Rf values. HPLC Chromatogram of standard ascorbic acid, phenolic acids and flavonoids Flavanoid, Ascorbic acid, lineoic acid, Ambiline, Heptanoic acid, Lycopsamine, supinine, Olenoic acid, Olenoic acid, Succinic acid and α-tocopherol shown in figure No.2. Antibacterial and antifungal activity of ethanolic leaf extract of *Berberis vulgaris L.* was carried out by cup plate method. The concentrations of the ethanolic leaves extract *Borago officinalis* at 200µg/ml were found moderately active 14mm and 16mm zone of inhibition of *E-Coli* and *S. Aureus* respectively, In antifungal activity the zone of inhibition of the ethanolic leaves extract *Borago officinalis* ranges between 100µg/ml and 200mg/ml. 200mg/ml was found 15mm and 18mm zone of inhibition for *C. Albicans* and *A. Niger* respectively moderately active, while 100mg/ml 11mm and 10mm zone of inhibition for *C. Albicans* and *A. Niger* respectively were found to

ISSN NO : 1006-8341

A REVIEW ON BIOANALYTICAL TECHNIQUES OF ANTI HIV DRUGS

Dr. Sanjay Kumar[1], Dr. Darsh Gautam[2], Mrs. Poonam Talwan[3], Mrs. Poonam Dogra[3], Mrs. Babita Patial[3], Mrs. Rekha Rana[4]

[1]Associate Professor, Laureate Institute of Pharmacy, Kathog, Kangra Himachal Pradesh 176031, India

[2]Associate Professor, Himachal Institute of Pharmaceutical Education and Research (HIPER), Nadaun, Hamirpur, Himachal Pradesh 177033, India

[3]Assistant Professor, Himachal Institute of Pharmaceutical Education and Research (HIPER), Nadaun, Hamirpur, Himachal Pradesh 177033, India

[4]Assistant Professor, DDM College of Pharmacy, Gondhpur Banehra, Amb, Una Himachal Pradesh 177206, India

ABSTRACT:

Bioanalytical method development largely depends on the experience and the preference of the developer. One of the major challenges facing the pharmaceutical industry today is finding new ways to increase productivity, decrease costs whilst still ultimately developing new therapies that enhance human health. To help address these challenges the utilization of analytical technologies and high-throughput automated platforms has been employed; in order to perform more experiments in a shorter time frame with increased data quality. During the last decade, quantification of low molecular weight molecules using liquid chromatography–tandem mass spectrometry in biological fluids has become a common procedure in many preclinical and clinical laboratories. This review highlights a number of techniques involved in quantifying anti- HIV drugs, bioanalytical liquid chromatography–tandem mass spectrometry, which is frequently encountered during assay development. Since plasma is one of the most widely adopted biological fluid in drug discovery and development, the focus of this discussion will be limited to plasma analysis. Many clinical trials as well as observational data (i.e. studies from clinical practice) have demonstrated that the benefits of antiretroviral treatment for people with HIV/AIDS outweigh their risks by selecting the appropriate method for analysis. Usually High-performance liquid chromatography [HPLC] coupled with ultraviolet [UV], Photodiode array detectors [PDA], Mass spectrophotometer [MS] detectors etc. are the important quantitative techniques used for the estimation of pharmaceuticals in biological samples. This review article is aimed to give an outline of different bio-analytical techniques which have been reported for direct quantitation of anti virals.

KEYWORDS: Bioanalytical Method, Chromatography, Anti-Viral Drugs.

Corresponding Author:-

Dr. Sanjay Kumar, Associate Professor, Laureate Institute of Pharmacy, Kathog, Kangra, Himachal Pradesh.

ISSN NO : 1006-8341

A REVIEW ON ACHYRANTHES ASPERA

Anchal Gangotia[1]*,Prince Thakur[2],Arti Devi[3], Amar Deep Ankalgi[4]

1,2 Student, M. Pharmacy (PA& QA), Laureate Institute of Pharmacy, Kathog, India

3 Associate Professor, Laureate Institute of Pharmacy, Kathog, India

4 Professor, HOD, Laureate Institute of Pharmacy, Kathog, India

ABSTRACT

Achyranthes aspera Line used as medicine plant (Amaranthaceae family). This plant contains a variety of antioxidants with various pharmacological properties, including as alkaloids, terpenoids, saponins, etc. Furthermore, employing different kind of techniques, this plant has been used to isolate a large number of chemical components. The ability to cure a broad range of human afflictions is made possible by all chemical components and pharmacological qualities.This paper discusses in detail the pharmacological, phytochemical, and ethnobotanical use of Achyranthes aspera. Researchers conducting additional study may find the information provided here regarding A. aspera beneficial.

Keywords: *Achyranthes aspera*, Analytical method , Antioxidant, Medicinal herb.

INTRODUCTION:

Treatment of numerous disorders using herbal therapy has a long history [1]. When access to modern healthcare facilities is limited, medicinal herbs are the only easily available and cheaply priced source of basic healthcare.They are employed to maintain and improve health [2]. Because they contain biologically active chemicals, different plant parts (leaves, stems, roots, and bark) are utilized to prepare medicines for treating minor or persistent illnessess. The primary plant bioactive chemicals include phenolic compounds, alkaloids, tannins, and flavonoids. They are occasionally also incorporated, for therapeutic purposes, into the diets of expecting and nursing mothers. [3]. Today, herbal medications can also be found in the form of pills, capsules, powders, or liquid extracts and tinctures, which are more concentrated liquid forms. They can also be applied topically to the skin directly or through lotions [4].

ISSN : 0044-0477

I.F = 0.1

A Review on Medicinal potential of the *Zingiber officinale*

Kiran Thakur [1*] Dr. Sanjay Kumar[2]

1* Kiran Thakur,Research Scholar, School of Pharmacy, Career Point University Hamirpur H.P-176041

Email: kiran.pharmacy@cpuh.edu.in

2 Dr. Sanjay Kumar, Dean cum Principal, School of Pharmacy, Career Point University Hamirpur H.P-176041

Email: diwansanjay1981@gmail.com

Corresponding Author: Dr. Sanjay Kumar, Dean cum Principal, School of Pharmacy, Career Point University Hamirpur H.P-176041

Abstract

Herbs and spices have received much interest in the world due to their ability to be absorbed into food and their potential health benefits. 70% to 80% of the world's population relies on complementary and alternative traditional medicine for their basic healthcare problems (herbal medicine). It was exported from India to the Roman Empire more than 2,000 years ago as a highly prized commodity. After the fall of the Roman Empire, Arab traders dominated the trade in ginger and spices, bringing their expertise to Europe. Ginger contains a variety of substances, including phenolic and terpene compounds. Anthraquinones, phenolic aldehydes and aldehydes are some of the most common phenolic compounds in plants. Ginger and other phytochemicals are being studied for their therapeutic properties. Ginger has a wide range of therapeutic properties, and can be used in a variety of ways. The anti-inflammatory, anti-diabetic and anti-obesity effects of ginger have been demonstrated in preclinical studies. Diabetes, obesity, and the SARS CoV-2 virus were all examined in silico as possible side effects of the medicine. A decade of research has been done on ginger.

Keywords: Ginger, Herbs, Pharmacological Activity, SARSCoV-2

DIRECTOR CUM PRINCIPAL
LAUREATE INSTITUTE OF
PHARMACY KATHOG
TEH. JAWALAMUKHI
DISTT. KANGRA (H.P.)

ISSN NO : 1006-8341

"PHYTOCHEMICAL SCREENING AND ANTIOXIDANT ACTIVITY OF LEAVES OF *ALPINIA GALANGA*"

Diksha Sharma[1*], Archana[1], Kamal Jeet[2], Sanjay Kumar[3]

[1]Department of Pharmacognosy, Career Point University, Hamirpur

[2]Department of Pharmacognosy, Assistant Professor, Career Point University, Hamirpur

[3]Department of Pharmacognosy, Associate Professor, Laureate Institute of Pharmacy Kathog, Jawalamukhi, Himachal Pradesh

*Corresponding author:
Diksha Sharma
Roll No: H15420
M.Pharmacy , 4th Semester
Department of Pharmacognosy
Career Point University, Hamirpur-HP

ABSTRACT

In this research work we carried out preparation of ehtanolic leaves extract of *A. galangal* and isolation of phytoconstituents by UV-Visible and FT-IR spectroscopy method and In-vitro DPPH radical scavenging activity and ABTS radical Scavenging antioxidant activity. The total Gallic acid correlation coefficient (R^2) is 0.9722 and the total Rutin correlation coefficient (R^2) is 0.9806 expressed in terms of GAE using the standard curve equation. The pure standard compound of gallic acid exhibited the different absorption bands at 260 nm; quercetin showed two absorption bands at 243 nm and 360 nm; rutin showed two absorption bands at 245 nm and 353 nm; tannic acid showed one absorption band at 265 nm. The low-intensity absorption bands at 1500-1450 cm^{-1} for C-C-O stretching vibration, and 1300-1100 cm^{-1} for O-H bending vibration arising from gallic acid, quercetin, rutin, and tannic acid, respectively. In the present work, the free radical scavenging activity of ethanol extract of leaves of *Alpinia galangal* is investigated using the DPPH method and ascorbic acid is used as a standard substance todetermine the scavenging activity. The crude ethanol extract of leaves and standard showed the maximum antioxidant activity with an IC_{50} value of 3.46 and 4.91 µg/mL, respectively. The ethanol extracts of *Alpinia galangal* showed appreciable anti-oxidant effects when compared with ascorbic acid and can be used for clinical trial in future.

DIRECTOR CUM PRINCIPAL
LAUREATE INSTITUTE OF
PHARMACY KATHOG
TEH. JAWALAMUKHI
DISTT. KANGRA (H.P.)

I.F = 0.6

NAAC - Apply Online | Silymarin: A Phytoconstituent | https://www.eurekaselect.com/article/128465

SCIENCE

Home | About | Publications | Articles by Disease | Marketing Opportunities | For Librarians | For Authors & Editors | More

Current Drug Therapy

Editor-In-Chief

ISSN (Print): 1574-8855
ISSN (Online): 2212-3903

Back | Journal | Subscribe

Silymarin: A Phytoconstituent with Significant Therapeutic Potential - A Narrative Review

Author(s): Sahil Sharma, Pravin Kumar*, Mahendra Singh Ashawat, Vinay Pandit, Chandrapal Singh Verma and Dinesh Kumar Sharma

Volume 18, Issue 2, 2023

Published on: 18 January, 2023

Page: [89 - 97]

Pages: 9

DOI: 10.2174/1574885518666221227100052

Price: $65

Purchase PDF

Become an Editorial Board Member | Become a Reviewer | Call for Editors

Article Metrics

PDF

Abstract

Silymarin, is a phytoactive constituent isolated from the fruits and seeds of Silybum marianum L Gaetn.), also called milk thistle belonging to the family of Asteraceae. The phytoactive has been used to treat several physiological disorders. The objective of this manuscript was to review the therapeutic prospective of silymarin

DIRECTOR CUM PRINCIPA
LAUREATE INSTITUTE OF
PHARMACY KATHOG
TEH. JAWALAMUKHI
DISTT. KANGRA (H.P.)

ISSN NO : 1006-8341

Microemulsion as an Emerging Approach for Drug Delivery of Therapeutics

[1]Vivek Sharma*, [2]Ritik Chaudhary, [3]Rahul Kumar, [4]MS Ashwat, [5]Pravin Kumar, [6]Himanshu Sharma, [7]Priyanka Sharma

[1,2,3,6,7]Research Scholar, [4]Director cum Principal of Laureate Institute of Pharmacy

[5]Associate Professor and Head, Department of Pharmaceutics,

Department of Pharmaceutics, Laureate Institute of Pharmacy, Kathog, H.P, India

[7]Government College of Pharmacy, Nagrota Bagwan, Kangra, H.P. India

Abstract: *Microemulsions, thermodynamically stable colloidal systems formed by mixing oil, water, and emulsifier, were first recognized in 1943 and named in 1959. Despite numerous publications, their commercial success as drug delivery systems has been limited, partly due to the challenges of formulation and differentiating them from similar systems. Trial-and-error methods have been employed, highlighting the need for efficient excipient selection and a comprehensive understanding of microstructure formulation. However, microemulsions hold promise as novel drug carriers, offering benefits such as extended shelf life, improved solubilization, and easy preparation and administration. They have been utilized for controlled or sustained drug release in diverse routes like ocular, percutaneous, topical, transdermal, and parenteral administration. Beyond drug delivery, microemulsions find applications in various industries, including pharmaceuticals, agrochemicals, cutting oils, biotechnology, food, cosmetics, analytical applications, and environmental detoxification. This review paper aims to explore microemulsions as drug carriers and discuss their potential in other fields, emphasizing the importance of understanding formulation requisites and microstructure to enhance their utility and commercial viability.*

Keywords: Microemulsion, surfactants, co-surfactants, solubility

1. INTRODUCTION

Pharmaceutical research continues to strive to create new drug delivery systems that improve the efficiency of currently available medications. Different kinds of medication delivery systems have been created over time. The microemulsion is one such system, and Hoar and Schulman initially presented it in the 1940s. They combined a milky emulsion with hexanol to produce a transparent single-phase solution [1]. The first microemulsion was successfully created by dispersing oil in an aqueous surfactant solution and adding alcohol as a co-surfactant. This microemulsion displayed transparency and stability.

As thermodynamically stable mixtures of water and oil, microemulsions are often stabilized by a surfactant, frequently in conjunction with a co-surfactant [2]. These systems are also referred to by alternative names such as swollen micelles, transparent emulsions, solubilized oil, and micellar solutions. Microemulsions consist of continuous structures wherein water and oil phases are

DIRECTOR CUM PRINCIPAL
LAUREATE INSTITUTE OF
PHARMACY KATHOG
TEH. JAWALAMUKHI
DISTT. KANGRA (H.P.)

ISSN NO : 1006-8341

The Role of Gymnema sylvestre in the Management of Diabetes: A Review

[1]Ritik Chaudhary*, [2]Rahul kumar, [3]Vivek Sharma, [4]Pravin kumar,[5] MS Ashawat

[1,2,3]Research Scholar, [4] Associate Professor and Head, Department of Pharmaceutics,

[5]Director cum principal of Laureate Institute of Pharmacy,

Department of Pharmaceutics, Laureate Institute of Pharmacy, Kathog, H.P, India

Abstract: *Gymnema sylvestre, commonly referred to as "gurmar" or "sugar destroyer," is a well-known Ayurvedic plant that belongs to the Asclepiadaceae family. This woody, climbing plant is used therapeutically for a range of conditions and is well-known for its hypoglycemic and antihyperglycemic properties, as well as its capacity to reduce blood lipid levels and promote weight reduction. Gymnema sylvestre has also been used as a preventative for dental cavities and cataracts as well as a treatment for stomach problems, constipation, water retention, liver illnesses, eye problems, and inflammation. Gymnemic acids, gymnemasides, gymnemagenin, gurmarin, and gypenoside are just a few of the bioactive substances found in its flowers, leaves, and fruits, all of which have been demonstrated to have medicinal benefits. Gymnemic acids are the main constituent of an extract that prompts the pancreas to produce insulin, and they have been specifically connected to the plant's antidiabetic effect. Additionally, the research on sweet-taste transduction makes use of gumarin, another anti-sweet compound discovered in Gymnema sylvestre. This uncommon medicinal plant's secondary metabolites and economic potential are now being investigated. This review aims to explore the potential therapeutic value of Gymnema sylvestre and the mechanism of action of its secondary metabolites.*

Keywords: **Gymnemic acid, gumarin, antidiabetic, Gymnema sylvestre, pharmacological activities, Antioxidant.**

1. INTRODUCTION

Despite the availability of a wide range of oral anti-diabetic medications, treating type 2 diabetes remains challenging due to the high risk of therapeutic failure [1]. After ten years of treatment with sulfonylureas, a widely used class of drugs that stimulates insulin release by blocking the B-cell K-ATP channel [2, 3], the majority of patients still fail. Herbal diabetic drugs may be capable of creating molecules with the optimal combination of therapeutic properties [3,4]. A prior evaluation of herbs and nutritional supplements claiming to help glycemic management, on the other hand, revealed that just a few plants were supported by rigorous clinical data. Gymnema sylvestre was one of the plants that showed promising clinical results. This plant is particularly intriguing due to its lengthy history as a diabetic medication and its wide spectrum of distinct and diverse effects.

Gymnema sylvestre (Asclepiadaceae) is a slow-growing perennial medicinal woody climber found mostly in central and peninsular India. Its leaves, known as "Gurmar" in India, are famous for their ability to inhibit the perception of sweet taste [5]. These leaves have been used to treat diabetes mellitus for over 2000 years, acquiring the moniker "Gurmar," which means "sugar destroying" [6,7]. G. sylvestre is used in food additives to combat obesity. Gymnema sylvestre is a woody, climbing plant native to central and southern India's tropical

Exploring Treatment Options for Rheumatoid Arthritis: A Comprehensive Review of Herbal and Synthetic Therapies

Sidhant Sharma[1], Balwinder Singh[1], Kiran Bala[1], Anshul Thakur[1], Manisha[1], Shiv Kumar Kushwaha[1*], Mahendra Singh Ashawat[2]

1. Department of Pharmacology, Laureate Institute of Pharmacy, Kathog, H.P.-176031, India.

2. Department of Pharmaceutics, Laureate Institute of Pharmacy, Kathog, H.P.17031, India

Address of Correspondence:
Mr. Shiv Kumar Kushawaha,
Department of Pharmacology,
Laureate Institute of Pharmacy,
Kathog, H.P.176031, India
Email: shiv.kushawaha@gmail.com,
Orchid Id: 0000-0002-3692-2774

Abstract

Rheumatoid arthritis (RA) is a chronic autoimmune disease characterized by joint inflammation and progressive joint damage. The pathophysiology of RA involves a complex interplay between immune dysregulation, synovial inflammation, and tissue destruction. This review article provides an overview of the current understanding of RA pathophysiology and the status of the disease, including diagnostic criteria, disease progression, and associated complications. The increasing interest in alternative treatment options for rheumatoid arthritis (RA), including herbal therapies, has captured attention in recent years. This review article dedicates to delve into the utilization of herbal treatments in managing RA. Numerous herbs and botanical extracts have demonstrated encouraging effects in reducing inflammation and modulating the immune response, presenting a potential adjunctive strategy for RA treatment. The article delves into the mechanisms of action, efficacy, and safety profiles associated with commonly employed herbal treatments. Furthermore, the review article provides insights into the synthetic treatment approaches for RA, encompassing disease-modifying antirheumatic drugs (DMARDs) and biologic agents. The current therapeutic strategies, including conventional synthetic DMARDs, targeted synthetic DMARDs, and biologic DMARDs, are thoroughly examined, shedding light on their respective mechanisms of action and clinical efficacy. Overall, this review article provides a comprehensive overview of the pathophysiology of RA, the current understanding of the disease, and the use of both herbal and synthetic treatments. It highlights the potential benefits and limitations of herbal therapies and emphasizes the importance of personalized treatment approaches in managing RA. Further research and clinical trials are needed to better understand the efficacy, safety, and long-term outcomes of herbal and synthetic treatments in RA management.

Send Orders for Reprints to reprints@benthamscience.net

Pharmaceutical Nanotechnology, xxxx, xx, x-x

MINI-REVIEW ARTICLE

Recent Trends in Nanocarriers for the Management of Atopic Dermatitis

Pravin Kumar[1,*], Mahendra Singh Ashawat[1], Vinay Pandit[1], Chandra Pal Singh Verma[1], Amar Deep Ankalgi[1] and Manish Kumar[2]

[1]*Laureate Institute of Pharmacy, VPO-Kathog, Jwalamukhi, Kangra, H.P, 176031 India;* [2]*M.M. College of Pharmacy, Maharshi Markendeshwar (Deemed to be University), Mullana, Ambala, Haryana, India*

ARTICLE HISTORY

Received: August 25, 2022
Revised: January 07, 2023
Accepted: January 25, 2023

DOI:
10.2174/2211738511666230330115229

Abstract: ***Background*:** Atopic dermatitis (AD) is a pruritic inflammatory skin condition with increasing global prevalence, almost affecting 15% to 30% of children and 5% of adults. AD results due to a complex interaction between the impaired skin barrier function, allergens, and immunological cells. Topical corticosteroids or calcineurin inhibitors in the form of creams or ointments are the mainstay of therapy, but they have low skin penetration and skin barrier repair efficiency.

***Objective*:** The above limitations of conventional dosage forms have motivated the development of nanoformulations of drugs for improved penetration and deposition in the skin for better management of AD.

***Methods*:** Databases, such as Pubmed, Elsevier, and Google Scholar, were reviewed for the investigations or reviews published related to the title.

***Results*:** The present review discusses the advantages of nanoformulations for the management of AD. Further, it also discusses the various types of topically investigated nanoformulations, *i.e.*, polymeric nanoparticles, inorganic nanoparticles, solid lipid nanoparticles, liposomes, ethosomes, transfersomes, cubosomes, and nanoemulsion for the management of atopic dermatitis. In addition, it also discusses advancements in nanoformulations, such as nanofibres, nanosponges, micelles, and nanoformulations embedded textiles development for the management of AD.

***Conclusion*:** The nanoformulations of drugs can be a better alternative for the topical management of AD with enhanced skin penetration and deposition of drugs with reduced systemic side effects and better patient compliance.

Keywords: Atopic dermatitis, nanoformulations, liposomes, nanoparticles, ethosomes, cubosomes.

1. INTRODUCTION

Atopic dermatitis (AD) is one of the most prevalent and intense pruritic inflammatory skin conditions affecting 15% to 30% of children and 5% of adults [1]. The initiation of the inflammatory cascade and pathogenesis of AD depends on several factors and is interrelated with patient environmental factors [2]. The inflammatory reaction in AD is relapsing and associated with severe pruritus. The inflammatory skin condition of AD leads to the decreased life quality of the patient [3].

Skin is the first line of defense from various external stimuli and flare factors. AD patients have compromised immunological strength and disturbed barrier function of the skin, mainly stratum corneum [2]. Both clinically and non-clinically active atopic skin shows compromised homeostasis in the stratum corneum, causing increased transepidermal water loss, susceptibility to pathogens, and enhanced penetration of external flare factors [4]. All these events lead to the initiation of an immunological cascade in skin layers by the mediation of immunological cells and cytokines [5].

1.1. Inflammatory Cascade in AD

The initiation of the inflammatory cascade in AD is not quite clear (Fig. **1**). It may initiate with scrabbling due to irritation or itching, causing activation of pro-inflammatory cytokines from the keratinocytes, or may initiate due to interaction between T-cells and infiltrated allergens from disrupted skin barrier [2, 3]. Both adaptive and non-adaptive immunity have a significant part in the pathophysiology of AD. Adaptive immune responses are highly specific to a particular antigen, whereas non-adaptive immune responses are non-specific. Adaptive immune responses become stronger with each repeated exposure to antigen. The pathogenesis of AD is mostly characterized by the enhanced differentiation of T-cells into T-helper (Th)1 and Th2 cells with an overall dominance of Th2 cells leading to enhanced levels of type-2 cytokines, *i.e.*, interleukin (IL)-4, IL-5 and

*Address correspondence to this author at the Laureate Institute of Pharmacy, VPO-Kathog, Jwalamukhi, Kangra, H.P-176031; E-mail: kumar3785@gmail.com

2211-7385/xx $65.00+.00

Section: Research Paper

I.F = 2.2

ROLE OF QUINAZOLINE IN BIOLOGICAL ACTIVITY: A REVIEW

oj Kumar[1], Sumit Kumar[2*], Dinesh Kumar[3], Suresh Kumar[4] and Deepti Sharma[5]
epartment of Pharmaceutical Sciences, Guru Jambheshwar University of Science and Technology, Hisar-125001, Haryana, India
2*.Corresponding Author
partment of Pharmaceutical Sciences, Central University of Haryana, Jant-Pali, Mahendergarh 123031, India
Email-drsumitkumar@cuh.ac.in
n Institute of Pharmacy, Om Sterling global University, Hisar-125001, Haryana, India
Laureate Institute of Pharmacy, VPO-Kathog, Kangra, Himachal Pradesh-177101
epartment of Pharmaceutical Sciences, Guru Jambheshwar University of Science and Technology, Hisar-125001, Haryana, India

RACT

its diverse applicability in the realm of medicine, the heterocyclic fused nucleus air has attracted a lot of attention in recent years research in chemistry. A number of and studies on the discovery and development of novel potential quinazoline nds have been published in the literature. Quinazoline and their derivatives are a type ical substance that is very prevalent.

als that are the most active and have a wide variety of biological effects actions such bacterial, antifungal, and antiviral properties antifungal, anti-HIV, analgesic, obial, anti-inflammatory, anticancer, and antihypertensive antioxidant, analgesic, ulsant, anti-malarial, anticancer, and anti-tubercular properties.

al of this review was to compile research on Quinazoline for its diverse ological effects described by researcher's activities, as well as recent attempts on this

ds: Quinazoline, Antimalarial,Anti-diabetic, Anti-inflammatory, Anticonvulsant

Section: Research Pa

PHARMACEUTICAL APPLICATION AND STRUCTURAL INSIGHT INTO THE FUSED DERIVATIVES O PYRIMIDINE: A REVIEW

Manoj Kumar[1], Sumit Kumar[2*],Dinesh Kumar[3],Suresh Kumar[4] and Ajay Kumar[5]

1. Department of Pharmaceutical Sciences, Guru Jambheshwar University of Science and Technology, Hisar-125001, Haryana, India

2*.Corresponding Author

Department of Pharmaceutical Sciences, Central University of Haryana, Jant-Pali, Mahendergarh 123031, India

Email-drsumitkumar@cuh.ac.in

3. Atam Institute of Pharmacy, Om Sterling global University, Hisar-125001, Haryana, Ind
4. Laureate Institute of Pharmacy, VPO-Kathog, Kangra, Himachal Pradesh-177101
5. Department of Pharmaceutical Sciences, Guru Jambheshwar University of Science an Technology, Hisar-125001, Haryana, India

ABSTRACT:

Pyrimidine skeleton, a diverse skeleton with the various applications in medicinal fiel beenstudied and reviewed since previous era. This scaffold had given a great revolution i of pharmaceutical sciences. Many anti-cancer, anti-viral, anti-microbial, anti-inflammatory had been provided by this scaffold utilization. Its fused scaffold had brought a great revolu the field as a result had become a scaffold with multi target ability. This review ba comprises of various compound synthesized using this scaffold against the various di majorly from year 2016-2019.It also gives an insight into the structural moieties'subs thathelps them to attain the potency of inhibiting the various targets.

KEYWORDS: Pyrimidine, anti-inflammatory activity, antimicrobial activity

I.F = 2.2

W OF THIAZOLE AND THEIR DERIVATIVES HAVING ANTIMICROBIAL ACTIVITY

Section: Researc

OVERVIEW OF THIAZOLE AND THEIR DERIVATIVES HAVING ANTIMICROBIAL ACTIVITY

Manoj Kumar[1], Sumit Kumar[2*],Dinesh Kumar[3], Suresh Kumar[4] and Mohit Jinda

1. Department of Pharmaceutical Sciences, Guru Jambheshwar University of Science a Technology, Hisar-125001, Haryana, India

2*.Corresponding Author

Department of Pharmaceutical Sciences, Central University of Haryana, Jant-Pal Mahendergarh 123031, India

Email-drsumitkumar@cuh.ac.in

3. Atam Institute of Pharmacy, Om Sterling global University, Hisar-125001, Haryana, In

4. Laureate Institute of Pharmacy, VPO-Kathog, Kangra, Himachal Pradesh-177101

5. Department of Pharmaceutical Sciences, Guru Jambheshwar University of Science an Technology, Hisar-125001, Haryana, India

BSTRACT

terocyclic compounds are those compounds which contain at least one different element, ox en, nitrogen, sulfur, etc. other than a carbon in a ring. Thizaoleis an aromatic heteroc npound which means it contains a different element such as nitrogen, sulfur, etc. other bon in a ring. Thiazole structure made up of three carbon atoms, with one nitrogen atom h one sulfur atom which is arranged in the form of a ring.Thiazole comes under the fami les which also include oxazoles and imidazoles. Sometimes thiazoles also considered ctional group. Thiazole is also called 1, 3-thiazole having molecular formula C_3H_3NS. r or pale yellow in color with a pyridine like anodour.Thiazole is a very important pa min B1, which is also called thiamine. It is also used in flavoring agent and in manufactu obacco related products. Thiazoles are also mainly used in dyes and non-steroidal mmatory drug. Thiazoledyes are mainly used for dyeing cotton. When thiazole fused ene ring it becomesbenzothiazole which has various medical importances such ancer, antimicrobial, antitubercular, etc. Naturally thiazole found in naturally occu

I.F = 0.2

ASSESSING THE EFFICACY OF VARIOUS POLYMERS IN THE FORMULATION OF EFFERVESCENT FLOATING TABLETS FOR ENHANCING THE RELEASE OF DICLOFENAC SODIUM IN THE GASTROINTESTINAL TRACT

SHIV KUMAR KUSHAWAHA*[1], SIMRAN CHOUDHARY[1], SHAD AHMAD[1], SHWETA SHARMA[1], PALAK SHARMA[1], JYOTI PATHANIA[1], NRIPENDRA SINGH[2]

1. Laureate Institute of Pharmacy (Department of Pharmacology), Kathog, Jawalamukhi, Kangra, H.P. (176031), India.

2. Department of Pharmacy, V.B.S. Purvanchal University, Jaunpur-222002, (U.P.) India.

Corresponding Author:

Shiv Kumar Kushawaha, Associate Professor, Department of Pharmacology. Email Id- shiv.kushawaha@gmail.com, Contact No.- 8894274558, ORCID- 0000-0002-3692-2774.

Other Authors:

Simran Choudhary, Research Scholar, Department of Pharmacology, Email Id- choudharysimran349@gmail.com, ORCID- 0009-0006-1272-4091.

Shad Ahmad, Research Scholar, Department of Pharmacology, Email Id- shadahamad.sa10@gmail.com, ORCID- 0000-0001-6156-4107.

Shweta Sharma, Associate Professor, Department of Pharmacology. Email Id- shweta1992sr@gmail.com, ORCID- 0009-0000-4030-3952.

Palak Sharma, Research Scholar, Department of Pharmacology, Email Id- palaksharma8826@gmail.com, ORCID- 0009-0002-6429-2578.

Jyoti Pathania, Research Scholar, Department of Pharmacology, Email Id- jyotipathania012@gmail.com, ORCID- 0009-0001-1480-3424.

Nripendra Singh, Assistant Professor, Department of Pharmacy, Email Id- nripendra2007@gmail.com, ORCID – 0000-0001-8764-3903.

ISSN NO : 1006-8341

"DEVELOPEMENT AND STANDARDISATION OF AN HERBAL FORMULATION OF MEDICINAL PLANT *BERBERIS VULGARIS*"

Diksha sharma[1*], Dr.kamal Jeet[1], Dr.sanjay kumar[2]

[1]Department of pharmacognosy, carrer point university, Hamirpur

[1]Department of pharmacognosy, Assistant professor Career point university Hamirpur

[2]Department of pharmacognosy Associate professor, Laureate institute of pharmacy Kathog, jawalamukhi H.P

***Corresponding Author**

Diksha sharma,
Department Pharmacognosy, M Pharma
Roll no. H15433 4th sem

ABSTRACT

B. vulgaris is used in conventional medicine for the treatment of fever, cough, liver illness, depression, hyperlipidemia, hyperglycemia, and bleeding. In this study, we discovered that B. vulgaris has anti-diabetic properties. Carbohydrates, tannins, flavonoids, glycosides, alkaloids, phenols, and tannins were found in the early qualitative phytochemical analysis (Table no.1). Berberis vulgaris L. leaf extract in 70% ethanol. The HPLC method's efficiency was evaluated using standard solutions of ascorbic acid, phenolic acids, and flavonoids. Table No. 2 and Figure No. 2 show the RSD of retention time and peak regions for several phytoconstituents. The percentage of -amylase inhibitory effects of Acarbose (at concentrations of 100g/ml) revealed 55.34% inhibition of -amylase activity with an IC50 value of 80.78 0.45g/ml. Berberis vulgaris ethanol extracts (at a concentration of 100g/ml) inhibited -amylase by 40.56%, with IC50 values of 30.25 2.5g/ml. As indicated in tables 3 and 4 and figure 4, ethanol extracts of Berberis vulgaris have significant -amylase inhibitory effects when compared to acarbose.

Keywords: ***Berberis vulgaris,*** **α-amylase, HPLC method, Anti-diabetic activity**

DIRECTOR CUM PRINCIPAL
LAUREATE INSTITUTE OF
PHARMACY KATHOG
TEH. JAWALAMUKHI
DISTT. KANGRA (H.P.)

Research Journal of Pharmacy and Technology
(Home.aspx)

ISSN
0974-360X (Online)
0974-3618 (Print)

Development of Efficient Analytical method for the multicomponent analysis of Pravastatin Sodium and Nebivolol Hydrochloride in Bulk Drug by RP-HPLC (AbstractView.aspx?PID=2023-16-5-67)

Author(s): Shivani Sharma (search.aspx?key=Shivani Sharma), Amar Deep Ankalgi (search.aspx?key=Amar Deep Ankalgi), Arti Devi (search.aspx?key=Arti Devi), Mahendra Singh Ashawat (search.aspx?key=Mahendra Singh Ashawat)

Email(s): shivangi2288@gmail.com (mailto:shivangi2288@gmail.com)

DOI: 10.52711/0974-360X.2023.00408 (https://doi.org/10.52711/0974-360X.2023.00408)

Address: Shivani Sharma1*, Amar Deep Ankalgi1, Arti Devi1,Mahendra Singh Ashawat2
1Department of Pharmaceutical Analysis and Quality Assurance, Laureate Institute of Pharmacy Kathog Jawalaji, H.P., India.
2Department of Pharmaceutics, Laureate Institute of Pharmacy KathogJawalaji, H.P., India.
*Corresponding Author

Published In: Volume - 16, Issue - 5, Year - 2023 (Issues.aspx?VID=16&IID=5)

I.P = 3-5

MINI-REVIEW ARTICLE

Current Topics in Medicinal Chemistry, XXXX, XX, 1-12

Send Orders for Reprints to reprints@benthamscience.net

1,3-thiazole Derivatives: A Scaffold with Considerable Potential in the Treatment of Neurodegenerative Diseases

Jasmine Chaudhary[1,*], Akash Jain[1], Ashwani Dhingra[2], Bhawna Chopra[2], Vishal Sharma[1], Jatin Gupta[1] and Aditi Kaushik[3]

[1]*M.M College of Pharmacy, Maharishi Markandeshwar (Deemed to be University), Mullana, Ambala, India;* [2]*Guru Gobind Singh College of Pharmacy, Yamunanagar, Haryana, India;* [3]*Laureate Institute of Pharmacy, Kangra, H.P. India*

ARTICLE HISTORY

Received: March 19, 2023
Revised: May 31, 2023
Accepted: June 07, 2023

DOI:
10.2174/1568026623666230719124850

Abstract: 1,3-thiazoles, which contain nitrogen and a sulfur atom is an unsaturated five-membered heterocyclic ring, have achieved a unique significant place in drug design and development because of their versatile structure and a variety of pharmacological activities, *viz.* anticancer, antiviral, antimicrobial, anticonvulsant, antioxidant, antidiabetic, *etc.* They have inspired researchers to design novel thiazole with different biological activities. The presence of the thiazole moiety has resulted in a large number of clinically useful drugs with a wide range of activities, such as Ritonavir (antiviral), Sulfathiazole (antimicrobial antibiotic), Abafungin, Ravuconazole (antifungal), Meloxicam (NSAID), *etc.*, that further verify this statement. The prevalence of neurodegenerative diseases like Alzheimer's, Parkinson's, and Huntington's is increasing at a rapid pace but existing treatments mainly provide symptomatic relief and are associated with undesired effects. Consequently, designing novel compounds with more effectiveness and reduced toxicity are required. 1,3-thiazole derivatives have emerged as excellent candidate in this regard and have an important role for the treatment of neurodegenerative diseases. In the current review, we have gathered all the appropriate literature which demonstrate the remarkable role of 1,3-thiazole and its derivatives in these diseases that may help design new compounds with more desired characteristics. The literature was assessed through worldwide scientific databases like GOOGLE, SCOPUS, and PUBMED using different keywords, and only relevant information published in English was evaluated.

Keywords: 1,3-thiazole, Synthesis, Neurodegenerative, Alzheimer, Parkinson, Huntington, Cholinesterase.

1. INTRODUCTION

Neurodegenerative diseases are progressive, fatal, distressing, heterogeneous neuronal dysfunctional disorders characterized by a person's inability to think, speak, understand, move, and make decisions [1, 2]. Among the hundreds of different neurodegenerative disorders, the three most prevalent disorders include Alzheimer, Parkinson, and Huntington's disease [3-5]. Multi-factorial circumstances, including dysregulation of ubiquitin-proteasomal pathway [6, 7] combined with impaired bioenergetics and mitochondrial dysfunction, free radical formation, oxidative stress [8], inflammation [9], and exposure to environmental toxins lead to alteration in protein dynamics with abnormal protein degradation and aggregation, *viz.* β- amyloid (Aβ) and Tau in

Alzheimer's disease; α-synuclein and Lewy bodies formation in Parkinson's disease; and huntingtin protein in Huntington's disease [5, 10-13], resulting in cell death.

1.1. Alzheimer's Disease

Alzheimer's disease (AD), is a multifaceted and progressive neurodegenerative disease [14] characterized by mutilation of pathological markers (β-amyloid plaques deposition and neurofibrillary tangles), cognitive function (dementia), disorientation, behavioral changes and eventual death [15, 16]. Due to a consistent deficit in cholinergic neurotransmission (particularly in the basal forebrain), it is considered the most extreme challenge to modern medicine [17-21]. Along with the low level of acetylcholine (overactivity of acetylcholinesterase), other factors, including oxidative stress, β-amyloid aggregation, and alteration in the dopaminergic and serotoninergic neurotransmission, also contribute to other symptoms of Alzheimer's disease [22, 23]. Of around 50 million people suffering from dementia worldwide, more than 70% are due to Alzheimer's (as per WHO), and this number is expected to reach around 115 million in 2050 [24]. As per 'Dementia India Report 2010' concluded by ARDSI, around 4 million people were reported with dementia in 2010, which is expected to double by the year 2030. Despite their high prevalence, no proper treatment is available for the prevention of disease [25] and currently, accessible therapies

*Address correspondence to this author at the M.M College of Pharmacy, Maharishi Markandeshwar (Deemed to be University), Mullana, Ambala, India; E-mail: jasmine.jain@mmumullana.org

1568-0266/XX $65.00+.00

Send Orders for Reprints to reprints@benthamscience.net

Endocrine, Metabolic & Immune Disorders-Drug Targets, 2023, *XX*, 00-00

MINI-REVIEW ARTICLE

Terpenoids in Diabetic Nephropathy: Advances and Therapeutic Opportunities

Manish Kaushik[1,2], Aditi Kaushik[3], Jasmine Chaudhary[1] and Akash Jain[1,*]

[1]*M. M. College of Pharmacy, M. M. (Deemed to be University),Mullana, Ambala, Haryana;* [2]*KC Institute of Pharmacy, UNA, H.P, India;* [3]*Laureate Institute of Pharmacy, Kathog, Kangra, H.P, India*

ARTICLE HISTORY

Received: November 30, 2022
Revised: July 06, 2023
Accepted: July 20, 2023

DOI:
10.2174/1871530323666230901164219

Abstract: Diabetic nephropathy (DN) is the foremost ailment resulting in end-stage renal damage. Chronic hyperglycaemia and hyperlipidaemia are the foremost reason for disease progression. The disease is characterized by the severity of albuminuria and cardiovascular disorders. Approximately 20 to 40% of the global prevalence of DN is mostly reported to occur in individuals with diabetes, and nearly 28% of DN occurs in individuals with other renal disorders. The pathological mechanism is very complex, involving innumerable targets and leading to multiple pharmacological effects. Thus, the scientific community is forced to work in search of safe and potent therapeutics that can tackle the complex pathology of DN effectively. The secondary plant metabolites categorized as terpenoids gained attention as potential therapeutics contrary to others for the management of diabetic nephropathy and other associated syndromes by their strong antioxidant activity and inhibition of advanced glycation and its associated products. This review focused on herbal therapeutics for the management of diabetic nephropathy. Moreover, different types of terpenoids, their biological sources, and proposed mechanisms of action are explored for the development of a novel pharmacophore for diabetic nephropathy.

Keywords: Diabetic nephropathy, albuminuria, therapeutics, secondary metabolites, terpenoids, chronic hyperglycaemia.

1. INTRODUCTION

Diabetic nephropathy (DN) is a ubiquitous ailment that is designated by prolonged albuminuria and a decrease in nephrotic functions. The kidney has an important function in maintaining blood haemostasis and glucose concentration. The high blood glucose and protein concentration leads to damage of blood and nerve vessels and thus hamper the normal functioning of the kidneys, and this condition is known as diabetic nephropathy. This is also called Kimmelstiel-Wilson syndrome, or nodular diabetic glomerulosclerosis or intracapillary glomerulonephritis and is reportedly associated with the damage of the nephrotic cells. The renal function disturbances lead to the presence of the typical pattern of glomerular disease [1-3]. Pathologically, the changes are first seen in the membrane of Bowman's capsule and lead to the accumulation of micronutrients during urine formation. Consequently, more protein starts to deposit on the membrane and progressively causes the loss of kidney function. The serum and blood urea nitrogen also get intensified and lead to the development of edema, nausea, malaise, headache, and fatigue. In due course of time, DN leads to the progression of a trial hypertension and increased cardiovascular morbidity and mortality.

Moreover, the heterogeneity of DN mainly depends upon the severity of diabetes and albuminuria at the time of prognosis [4-7].

*Address correspondence to this author at the M. M. College of Pharmacy, M. M. (Deemed to be University), Mullana, Ambala, Haryana;
E-mail: akash.jain@mmumullana.org

Approximately 20 to 40% of the global prevalence of DN is mostly reported to occur in individuals with diabetes, and nearly 28% of DN occurs in individuals with other renal disorders. The clinical feature suggests that individuals with T2DM are more prone to develop DN as compared to individuals with T1DM, as 90% of the population is associated with T2DM. Moreover, the prevalence rates of DN varied according to age and ethnic groups as a random analysis of approximately twenty-eight thousand five hundred individuals from different thirty-three different countries with T2DM and the rates of 55% in Asian and Hispanic groups as compared to 46.6% in Caucasians [8, 9]. Moreover, siblings with diabetic nephropathy and other complications have a three times more significant risk of deterioration from the same disease than siblings of diabetic patients without nephropathy. Moreover, DN is also associated with other diabetic complications and different other syndromes, including microvascular complications, familial hypertension, obesity, cardiovascular complications, *etc.* [10-13].

The pathophysiology of DN is elaborative, and multifactorial that involves various pathways and mediators. Traditionally, diabetic nephropathy is associated with abnormal hemostasis that includes metabolic syndrome and abnormal hormonal regulations, However, the modern concept suggests the involvement of various factors in the pathology of the disease. The different pathways like the Renin-Angiotensin-Aldosterone System, the Role of Angiotensin II, Oxidative Stress, inflammatory mediators, and the role of other transcription factors and Protein Kinases [14, 15], The knowledge of the pathophysiology of diabetic nephropathy, various medicinal

1871-5303/XX $65.00+.00

3.2.1 Number of Papers published per teacher in the journalsnotified on UGC website during the year

S. No.	Title of Paper	Name of Authors	Department of teacher	Name of Journal	Year of Publication	ISSN No.	Link to the recognition in UGC enlistment of the Journal
1	Challenges and Current Perspectives of Medical Pharmaceutical Waste Management	Rajat*, Amar Deep Ankalgi, Shivani Chaudhary, Mahendra Singh Ashawat	Pharmaceutical Analysis & Quality Assurance	YMER	2022	0044-0477	YMER – An International Peer-Reviewed Journal (ymerdigital.com)
2	Overview: Impact of Hydrogen Sulphide on Some Advanced Molecular Modulators Involved in Cardiac Hypertrophy	Shiv Kumar Kushawaha 1, 2*, Manish Sinha 1 , Amar Deep Ankalgi1 , Nripendra Singh3 , Puneet Kumar4 , Mahendra Singh Ashawat	Phamacology	YMER	2022	0044-0477	http://www.ymerdigital.com/
3	Review Article: Recent Advancement In Transdermal Drug Delivery System (Tdds)	Kajal , Dev Raj Sharma , Vinay Pandit , M.S. Ashawat	Pharmaceutics	Journal of Positive School Psychology	2022	2717-7564	http://journalppw.com
4	Review: Novel Drug Delivery for the Treatment of Osteoarthritis (OA)	Kajal, Dev Raj Sharma, Vinay Pandit, M.S. Ashawat	Pharmaceutics	International Journal of Innovative Science and Research Technology	2022	2456-2165	www.ijisrt.com
5	A detailed Review on Fast Dissolving Niosomal film for sub lingual drug delivery	Mahu bala,Poonam Piplani,Amardedep ankalgi	Pharmaceutics	Research Jouranl of Pharmaceutical dosage form and technology	2022	0975-4377	www.proquest.com
6	Capillary electrophoressis and mass spectrometry as bio analytical tool	, Manisha, CPS Verma , Amar Deep Ankalgi , Puneet Kumar , Mahendra Singh Ashawat	Pharmaceutical Chemistry	YMER	2022	0044-0077	http://ymerdigital.com
7	Pharmacognistic.preliminaryphtochemical screening and antitextile activity of Lanata camara	Shweta sharma, Shad ahmad,Jypti pathania,Maadhu sharma, Shiv kumar	Pharmacology	YMER	2022	0044-0077	http://ymerdigital.com

DIRECTOR CUM PRINCIPAL
LAUREATE INSTITUTE OF
PHARMACY KATHOG
TEH. JAWALAMUKHI
DISTT. KANGRA (H.P.)

8	Advanced therapeutic methods for alzheimer's disease	Madhu Bala, Amardeep Ankalgi	Pharmaceutical chemistry	YMER	2022	0044-0077	http://ymerdigital.com
9	Hydrogels for localized drug delivery: A special emphasis on dermatologic therapy	Shammy Jindal,Rajendra awashti,Kamya Goyal, GT Kulakarni	Pharmaceutics	Dermatologic Therapy	2022	1396-0296	DOI: 10.1111/dth.15830
10	Application of Berberine on skin disease: A Review	Keshav dhiman, Anshul sharma,Kamya goyal, Vinay pandit, M S Ashawat, Shammy Jindal	Pharmaceutics	Research Jouranl of Pharmaceutical dosage form and technology	2022	0975-4377	www.anvpublication.org
11	Development and evaluation of novel aqueous Neem leaf extract: A Potent Contraceptive agent	Nripendra singh, Surender singh, Shiv kumar	Pharmacology	Jounal of Pharmaceutical negative Results	2022	0976-9234	www.pnjournal.com
12	Natural coloring agents for fibers and their Medicinal values: A Review	Rinu rana,Keshav Dhiman, MS Ashawat	Pharmacognosy	Journal of Natural fibers	2022	1544-0478	https://www.tandfonline.com/

DIRECTOR CUM PRINCIPAL
LAUREATE INSTITUTE OF
PHARMACY KATHOG
TEH. JAWALAMUKHI
DISTT. KANGRA (H.P.)

Challenges and Current Perspectives of Medical Pharmaceutical Waste Management

[1]Rajat*, [1]Amar Deep Ankalgi, [1]Shivani Chaudhary, [2]Mahendra Singh Ashawat

[1]Department of Pharmaceutical Analysis & Quality Assurance, Laureate Institute of Pharmacy, Kathog, HP

[2]Department of Pharmaceutics, Laureate Institute of Pharmacy, Kathog, HP

Corresponding author:

Rajat

e-mail: rajat9250@gmail.com

ABSTRACT

Medicinal and Pharmaceutical waste is any waste products that contains wastes generated in hospital care unit, medicinal drugs that are expired, unused, contaminated damaged or no longer needed and disposable items. In a healthcare facility, pharmaceutical waste can result from a variety of activities and locations. There is generation of drug waste at site of compound pharmacies. It is not uncommon for medicines to spill over, unused as well as bottles and vials containing residual drugs and household wastes of pharmaceutical products. In this review we illustrate the types medical and pharmaceutical waste like biomedical waste, infectious waste, pathological waste, chemical waste, cytotoxic waste, pharmaceutical waste etc. Most drugs and their metabolites, remain active in the environment for a long time after they have been excreted out that can have harmful and hazardous effects to the ecosystem. The most effective pharmaceutical waste management strategies include proper prescription and dispensing in unit dosage form as per the requirement of the patient, followed by redispersing and recycling medication that remains unused throughout the supply chain. The only medication that can be redispersed is one that still has a good qualities and stability. The review also covers the waste disposal techniques for both solid and liquid formulations such as incineration, autoclaving, encapsulation, burial etc and overall roles of pharmacist to address the global issues of waste management.

KEYWORDS: *Pharmaceutical Waste, incineration, Environmental Pollution, encapsulation, Pharmaceutical and Personal Care Products (PPCPs).*

Original Article

Development and Evaluation of Novel Aqueous Neem Leaf Extract: A Potent Contraceptive Agent

Nripendra Singh[1*], Ritu Singh[2], Surendra Singh[3], Puja[4], Sudhir K. Upadhyay[5], Bharat S. Chaute[6], Bhuneshwar Dutt Tripathi[7], Yogesh Singh[8], Srishti Tiwari[9], Shiv Kumar Kushawaha[10], Amit Kumar[11]

[1, 3, 4]Department of pharmacy, V.B.S. Purvanchal University, Jaunpur-222002, (U.P.) India.
[2]Dept. of Pharmaceutics, K.J. College of pharmacy, Babatpur, Varanasi, U.P., India.
[5]Dept. of Environmental Sciences, V.B.S. Purvanchal University, Jaunpur, U.P. India.
[6]Department of Pharmaceutics, Poona College of Pharmacy, Bharati Vidyapeeth Deemed University, Erandwane, Pune, Maharashtra, India.
[7, 9]Narayan Institute of Pharmacy, Gopal Narayan Singh University, Jamuhar, Rohtas, Bihar, India.
[8]Sultanpur Institute of Pharmacy, Saifullaganj, Sultanpur U.P. India.
[10]Laureate Institute of Pharmacy, Kathog, Distt. Kangra, H.P. India.
[11]Tahira Institute of Medical Sciences, Gorakhpur, U.P. India.

Abstract

In the midst of the global epidemics of both unwanted pregnancies and sexually transmitted infections (STIs), possibilities that provide protection with minimal side effects are ideal. Therefore demand is increasing for vaginal contraceptives which protect from infection too. The spermicidal activity was determined using a modified method of Sander and Cramer. The extract was mixed with sperm suspension containing sperm. The mixture was mounted on the stage of Polarized microscope for 20 s at 100x (oil immersion) and observed for motile sperm. The spermicidal activity of novel aqueous neem extract on rat spermatozoa was same as in case of human spermatozoa. . The MEC of NANE was found to be 2.5 mg/ml and 5 mg/ml in rat and human spermatozoa respectively. The present study describes the simple, one step, novel method of extraction and evaluation of *in-vitro* spermicidal activity in rat spermatozoa and *in-vivo* contraceptive efficacy in female wistar rat. It may be concluded that prolonged and controllable drug delivery of neem constituents from mucoadhesive gel with various loading doses, is achievable and delivered dose in controlled manner for fertility control.

Keywords: Contraceptive; Neem leaf extract; Novel method of extraction; *In-vitro spermicidal activity in human spermatozoa.*

Introduction

The population explosion is a global problem that poses significant threat to the quality of life, more particularly in the underdeveloped and developing countries. The key requirement to combat this grave situation is the availability of suitable contraceptive devices that people would adopt to control birth rate [1]. A number of contraceptive methods are available; however, acceptability of these methods has quite often been limited by their associated untoward side effects, failure rate or irreversibility. This prevailing situation demands the development of newer contraceptive options that should be simple, safe, reversible, cost - effective and, overall, that would be acceptable to the majority of the world population irrespective of culture, religion and race. Of the contraceptive strategies available, the barrier methods are the most commonly used option that has gained recent surge of interest because of its temporal use with possible avoidance of systemic effects, over-the-counter, availability and easy usage [2]. Although male or female condoms used correctly and consistently is the only available method shown to be effective in preventing both unwanted pregnancies and ST/HIV infections, women often have little power to negotiate the use of condoms with their partners and are unable to protect themselves from nonconsensual coercive sex. The currently available spermicidal contraceptive formulations are effective, but their repeated use is

Access this article online

Quick Response Code:

Website: www.pnjournal.com

DOI:

Address for Corresponding: Dr. Nripendra Singh, Department of pharmacy, Veer Bahadur Singh Purvanchal University, Jaunpur – 222003, Uttar Pradesh State, India.
E-mail: nripendra2007@gmail.com, Tel: +91 2556 252529, Fax: +91 2556 253179

Received Date: 20 Oct 2021 **Accepted Date:** 20 Dec 2021

Published Date: 05 Jan 2022

How to cite this article: Nripendra Singh, Ritu Singh, et al., Development and Evaluation of Novel Aqueous Neem Leaf Extract: A Potent Contraceptive Agent, J Pharm Negative Results 2022;13 (2):1-10.

R || ISSN : 0044-0477

PHARMACOGNOSTIC, PRELIMINARY PHYTOCHEMICAL SCREENING & ANTI-TERMITE ACTIVITY OF LANTANA CAMARA

Shweta Sharma[1*], Shad Ahmad[1], Jyoti Pathania[1], Simran Choudhary[1], Madhu Sharma[1], Shiv Kumar Kushawaha[2]

[1] *Department of Pharmacology, Himachal Institute of Pharmaceutical Education & Research, Bela, Nadaun, Hamirpur, Himachal Pradesh, 177033*

[2] *Department of Pharmacology, Laureate Institute of Pharmacy, Kathog, Distt. Kangra, H.P. 176031.*

**Address of Correspondence: Department of Pharmacology, Himachal Institute of Pharmaceutical Education & Research, Nadaun, H. P. 177033*

Tel: 91- 8988636126, email: shweta1992sr@gmail.com

ABSTRACT

Objective: *The present article attempts to evaluate the physiochemical and preliminary phytochemical along with anti-termite activity using chloroform extract, methanolic extract, and ethanolic extract of dry Lantana camara leaves as well as flowers against the termites.*

Methods: *Different concentrations of the filtrate ranging from 1-5% were tested against termites and observed for 6 hours of exposure. The insecticidal effect was analyzed by observing and recording the death rate of termites.*

Results: *1% methanolic, ethanolic, and chloroform extracts of leaves caused around 30%, 40%, and 80% mortality at 2hour exposure, and at 2%-5% caused 50-100% mortality in termites at various exposure periods. The chloroform leaf extract was most effective as an anti-termite agent, as 1% chloroform leaf extract resulted in 80% mortality at 2hour exposure and 2%-5% extract concentrations caused a mortality rate of 95-100% at various exposure periods, i.e., dose-dependent mortality was observed.*

Conclusion: *From these results, it was concluded that chloroform extract of Lantana camara could substantially protect from termite attack.*

Keywords: *Lantana camara, Physiochemical Properties, Pharmacognostic Parameters, Anti-termite Activity.*

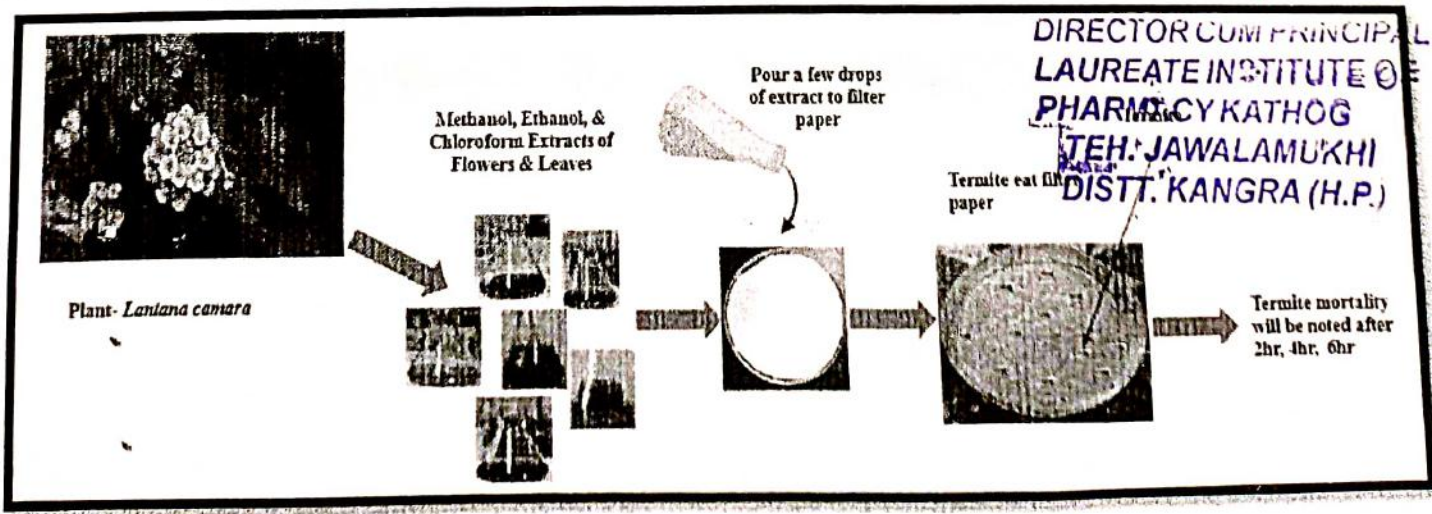

Fig. 1 Graphical Abstract

ER || ISSN : 0044-0477

http://ymerdigital.com

CAPILLARY ELECTROPHORESIS AND MASS SPECTROMETRY AS BIOANALYTICAL TOOL

Manisha*, C.P. S Verma, Pooja Kaushal, Amar Deep Ankalgi and Mahendra Singh Ashawat

Department of Pharmaceutical Analysis and Quality Assurance, Department of Pharmaceutics, Laureate Institute Pharmacy,
Kathog, Jawalamukhi, Himachal Pradesh 176031, India

ABSTRACT: - Capillary electrophoresis is a mature separation technology that is effectively coupled with mass spectrometry (CE - MS) and is well - suited for this purpose. CE - MS platforms have attracted considerable interest from the proteomics community as a selection to LC -MS. CE offers advantages over LC, including effective and fast separations paired with low sample consumption. In addition, solvent consumption (waterless or organic) in CE - MS is actually low, making it environmentally profitable. The most common CE - MS approach used in the proteomics field is capillary zone electrophoresis (CZE) coupled with electrospray ionization (ESI). In proteomics exploration, proteins are frequently associated using a well-established most up approach. This strategy is grounded on circular identification of proteins through digestion (enzymatic or chemical) to give peptides that are more analysed by either LC-MS or CE-MS. CE-MS has been used to determine the modesty and the stability of proteins in medicine discovery. These systems grounded on their available type of separation instruments and mass spectrometers.

KEYWORDS: - Mass spectrometry , separation, electrospray ionization, determination , importance.

INTRODUCTION: -

Capillary electrophoresis (CE) is a powerful separation technology that deals with analytes in liquid forms. The most common channel of separation in CE is fused-silica capillary with 360 μm outer diameter and 50–75 μm inner diameter. In a typical CE operation, a small section of

Volume 7, Issue 5, May – 2022

International Journal of Innovative Science and Research Technology

ISSN No:-2456-2165

Review: Novel Drug Delivery for the Treatment of Osteoarthritis (OA).

Kajal
Research scholar,
Laureate Institute of Pharmacy,
Kathog, Jawalamukhi,
Himachal Pradesh 176031, India

Dev Raj Sharma, Vinay Pandit, M.S. Ashawat
Assistant Professor, Department of Pharmaceutics,
Laureate Institute of Pharmacy,
Kathog, Jawalamukhi,
Himachal Pradesh 176031, India.

Abstract:- As people live longer, the prevalence of osteoarthritis has increased, making it the most frequent kind of arthritis. During osteoarthritis, tissue of cartilage on articular joints corrodes, causing pain and sometimes debilitating loss of function in patients. The most significant risk factor for osteoarthritis is getting older. Osteoarthritis, is the most common chronic joint illness, and becomes common nowadays as people become older. It disturbs the majority of people over 65 and is a main musculoskeletal reason of reduced mobility in the elderly. Because the particular molecular mechanisms behind the degradation of cartilage matrix and the development of OA are unknown, there are presently no viable therapies to slow the advancement of OA or prevent irreversible cartilage degradation other than total joint replacement surgery. The major molecular pathways involved in OA pathogenesis will be discussed in this study, as well as new insights into prospective molecular targets. Various Novel carrier are used to enhancement of drug delivery to the site of action.

Keywords:- *Osteoarthritis(OA).Aging, Cartilage,Distruction,Nanocarrier.*

I. INTRODUCTION

The most common category of disease arthritis is (OA) osteoarthritis(1). OA mainly disturbs the joints of the hip, knee and hand and is induced by articular cartilage deterioration and subsequent synovitis.(2). Obesity, genetic susceptibility, and joint injury are all responsible for the development of osteoarthritis(3).Osteoarthritis is most common causes of chronic impairment in older people(4). In many patients, functional impairment and discomfort can lead to depression and significant sadness (3). The disease's prevalence is expected to rise as the world population's lifespan lengthens.(5). It's a cartilage condition, which affects the smooth rubbery cushion that surrounds the joint's bones. (6).Osteoarthritis causes cartilage breakdown, which is linked to damage to the menisci and other joint components, as well as bone remodeling.

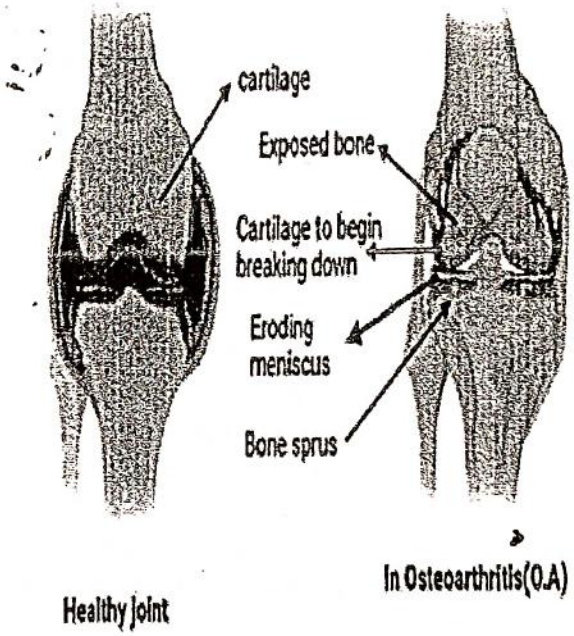

Fig. 1: Shows a normal/healthy joint and a joint affected with Osteoarthritis

According to the 3rd Nutrition Examination and National Health Survey, approximately 37.4 percent of persons aged 60 and up in the United States had radiographic evidence of OA(7).OA is a primary musculoskeletal reason of reduced mobility in the old aged people, affecting joints such as knees, wrists, hips, and spine(8). While various risk factors for osteoarthritis have been proposed, such as genetic susceptibility, ageing, joint misalignment and obesity, the pathophysiology of osteoarthritis is still not clear(9). Stiffness, joint deformities, stiffness, chronic pain, radiographic joint space constriction and joint instability are the most common clinical complaints(10).

The risk factors of osteoarthritis have been identified as: Genetic, Susceptibility, Age, Obesity, Joint misalignment, and among others(11).

Clinical symptoms: Stiffness, joint deformities, stiffness, chronic pain, radiographic joint space narrowing, Redness(12).

Journal of Positive School Psychology
2022, Vol. 6, No. 8, 6260-6271

http://Journalppw.com

Review Article: Recent Advancement In Transdermal Drug Delivery System (Tdds)

Kajal*[1], Dev Raj Sharma[2], Vinay Pandit[3], M.S. Ashawat[4]

*[1]*Research scholar, Laureate Institute of Pharmacy, Kathog, Jawalamukhi, Himachal Pradesh 176031, India.*
[2]*Assistant Professor, Department of Pharmaceutics, Laureate Institute of Pharmacy, Kathog, Jawalamukhi, Himachal Pradesh 176031, India.*
[3]*Head of Department, Department of Pharmaceutics, Laureate Institute of Pharmacy, Kathog, Jawalamukhi, Himachal Pradesh 176031, India.*
[4]*Director cum Principal, Department of Pharmaceutics, Laureate Institute of Pharmacy, Kathog, Jawalamukhi, Himachal Pradesh 176031, India.*
**Corresponding author: Kajal*[1]*
[1]*Research scholar, Laureate Institute of Pharmacy, Kathog, Jawalamukhi, Himachal Pradesh 176031, India.*
Email: kajalmandyal22@gmail.com,

ABSTRACT:

TDDS is the best and easily self-administered system. It interacts with the skin and delivers the medicament in a controlled manner into the systemic circulation. It reduces/avoids the side effect related to oral therapy, like-hepatic first-pass metabolism, GIT irritation, etc. The skin infusion enhancer technique has been advanced to improve the bioavailability of the drugs. So various Transdermal dosage forms have been prepared like: Transdermal patches, Gel, Cream, Ointments, etc. The Transdermal route is a viable option to enhance the variety of drugs. Transdermal drug delivery has become the primary route of delivery for a variety of medications that would otherwise be difficult to supply. There are some advantages to Transdermal medicine administration. Primarily to prevent first-pass metabolism and a stomach environment that would render the drug inactive in pharmaceuticals used to treat skin problems as well as for systemic effects to treat ailments of other organs. The therapy of hormone replacement, pain management, smoking cessation, neurological illnesses and angina pectoris like as Parkinson's ailment are all examples of Transdermal products and applications. Formulated to distribute the medicine into the systemic circulation at an optimal pace, it must stick to the skin for the desired period and not cause sensitization or skin irritation. By-passing first-pass metabolism to enhance bioavailability Keeping pharmacokinetic peaks and troughs to a minimum, Tolerance and dosage are being improved. In Continuous Delivery, increasing patient compliance is important.

KEYWORDS: Patches, Permeation, skin, stratum corneum, drug, Transdermal, delivery

INTRODUCTION:

Oral administration is the frequent method of medication distribution with significant demerits such as reduced bioavailability as a result of hepatic first-pass metabolism and a proclivity for causing oscillations in blood level (both for low and high). To address these issues, a novel drug delivery mechanism must be developed that avoids first-pass metabolism, reduces stomach discomfort, and boosts drug bioavailability. As a result, a system for Transdermal drug delivery has been created..(1)

These are self-administered systems in which medications are distributed to the blood circulation through the skin in a controlled way.(2) Because only a few medications can be given through the skin and the topical formulation must remain intact with the skin surface, the use of Transdermal patches has recently been limited..(3)

The medicine is permeated through multiple layers of skin(as shown in fig(a)) by a different method

ISSN : 0044-0477

Advanced Therapeutic Methods For Alzheimer's Disease

Madhu Bala*[1], Amar Deep Ankalgi[1]

[1]*Laureate Institute of Pharmacy and Research Centre Kathog-176029, Jawalaji, India*
*Corresponding author: Madhubajaj160@gmail.com**

Abstract

In affluent nations, Alzheimer's disease (AD) is today one of the largest healthcare concerns. There is no efficient medication that can stop the onset of a disease. In recent years, research on innovative pharmacotherapies has primarily been based on It is the β-amyloid (A) peptide that causes cognitive decline and neuronal death. The most typical cause of dementia is Alzheimer's disease (AD). β- Amyloid- buildup, which results in the development of senile plaques, and the intracellular presence of neurofibrillary tangles made of hyperphosphorylated tau protein are features of the disease's pathogenesis. We can characterize the key fronts in the therapeutic approach to AD: the approved drugs currently on the market for the treatment of the disease, including aducanumab, donepezil, galantamine, rivastigmine, memantine, and a combination of memantine and donepezil; therapies under investigation that focus primarily on Amyloid β pathology and tau pathology; and other complementary therapies intended to enhance lifestyle in order to contribute to disease prevention. Research has placed a lot of emphasis on finding novel therapeutic strategies that specifically target the alleged underlying pathogenic pathways, and it is anticipated that these efforts may eventually lead to the development of novel drugs with disease-modifying capabilities. The purpose of this review was to evaluate and summarize existing therapies as well as potential future alternatives for treating AD.

Keywords: *Alzheimer's disease, dementia, β-amyloid pathology, tau pathology; pharmacology; drugs.*

Introduction

Alzheimer's disease is a degenerative neurological condition that results in brain shrinkage and the death of brain cells (1). The most prevalent kind of dementia characterized by a steady deterioration in cognitive, behavioral, and social abilities and impairs a person's capacity for independent functioning is Alzheimer's disease. (2). The most prevalent form of dementia is Alzheimer's disease. It is a gradual disease that starts with mild memory loss and could impair one's capacity to interact socially and react to their surroundings (3, (4). Alzheimer's disease involves parts of the brain that control thought, memory, and language. It can seriously affect a person's ability to carry out daily activities. Alzheimer's disease is a condition that affects the brain. (5). Dr. Alois Alzheimer is honored by the disease's name. Dr. Alzheimer discovered alterations in the brain tissue of a woman who

DIRECTOR CUM PRINCIPAL
LAUREATE INSTITUTE OF
PHARMACY KATHOG
TEH. JAWALAMUKHI
DISTT. KANGRA (H.P.)

ER || ISSN : 0044-0477

http://ymerdigital.com

Overview: Impact of Hydrogen Sulphide on Some Advanced Molecular Modulators Involved in Cardiac Hypertrophy

Shiv Kumar Kushawaha [1, 2*], Manish Sinha [1], Amar Deep Ankalgi[1], Nripendra Singh[3], Puneet Kumar[4], Mahendra Singh Ashawat [1]

[1] Laureate Institute of Pharmacy, Kathog, Distt. Kangra, H.P. 176031.
[2] Research Scholar, Department of Pharmaceutical Sciences & Technology, Maharaja Ranjit Singh Punjab Technical University, Bathinda (India), 151001.
[3] Department of Pharmaceutical Sciences, VBSP University, Jaunpur (UP) – 222002
[4] Department of Pharmacology, School of Pharmaceutical Sciences, Central University of Punjab, Ghudda, Bathinda- 151401

**Address of Correspondence: Laureate Institute of Pharmacy, Kathog, Distt. Kangra, H.P. Tel.: 91-889427458. email: shiv.kushawaha@gmail.com,*

Abstract:
Pressure overload (aortic stenosis) induced myocardial hypertrophy is allied with a poor prognosis in humans. It leads to the development of cardiac arrhythmias, diastolic dysfunction, and ultimately congestive heart failure. Heart failure is a global pandemic disease, affecting an estimated 26 million people worldwide and more than 4 million in India. This poses a huge burden to both individuals and society. However, there is limited knowledge regarding the underlying molecular mechanisms. Therefore, we hypothesized that the various cellular signaling pathway is playing a key role in myocardial hypertrophy. In this review, we were highlighting that drug-like H_2S can target these cellular signaling pathways and hold promise as a potential lead for therapeutic intervention. Furthermore, it includes the concerns associated with H_2S based therapy. In literature, clinical trials suggest that H_2S based therapy is beneficial in cardiac hypertrophy and other diseases. The realization of the biological importance of H_2S in numerous cells, tissues, and organs is now shedding light on the pathogenesis of various human diseases and paving the way for innovative therapeutic interventions.

Keywords: *Aortic stenosis; cellular Signaling; H_2S; myocardial hypertrophy; Heart failure.*

Dermatologic Therapy / Volume 35, Issue 11 / e15830
REVIEW ARTICLE

Hydrogels for localized drug delivery: A special emphasis on dermatologic applications

Shammy Jindal, Rajendra Awasthi ✉, Kamya Goyal, Giriraj T. Kulkarni ✉.

First published: 15 September 2022
https://doi.org/10.1111/dth.15830

Abstract

Skin disease treatment is a complex and time-consuming process due to the complex etiology, numerous side effects of conventional therapies, and difficulties in determining primary causes of the disease. Superficial wounds are often easy to treat. However, treatment of severe wounds caused by burn is challenging for clinicians. Optimum therapeutic benefits are based on the site-specific delivery of medicaments at the right time for a prolonged duration. Systemic toxicity and frequent dosing are the major challenges associated with the use of conventional therapeutics. Hydrogels are material of choice for drug delivery because of their high biocompatibility and ability to hold and release therapeutic agents. The number of hydrogels available for use in cosmetology and dermatology continues to grow during the past 1–2 decades. However, new hydrogel materials with high biocompatibility, antibacterial properties, and the ability to stimulate skin regeneration processes are in high demand. These are three-dimensional networks, which absorb a large amount of biological fluids and water. Hydrogels can be used as a biosensor, carrier systems for cells, drug delivery carriers especially for topical applications and in contact lenses. Hydrogels are highly porous carriers containing about 90% water. Stimuli-responsive hydrogels cause a change in network structure that is completely reversible in nature. The present review describes the applications of hydrogels in pharmaceutical formulations with a special emphasis on the treatment of dermatologic conditions such as acne, psoriasis, and mycosis.

CONFLICT OF INTEREST

All the authors declare that there is no conflict of interest.

Journal of Natural Fibers >
Volume 19, 2022 - Issue 16

Review

Natural Coloring Agents for Fibers and Their Medicinal Values: A Review

Rinu Rana, Keshav Dhiman & Mahendra Singh Ashawat

Pages 14755-14770 | Published online: 02 May 2022

Download citation https://doi.org/10.1080/15440478.2022.2068730

ABSTRACT

Natural coloring agents obtained from plants, insects, animals, and minerals are used to color faces, hairs, textiles, and food preparations for centuries. This current review explained the role of traditional natural coloring agents in ancient times. It encompasses the advantages of natural dyes over synthetic dyes, their classification, and medicinal properties. The objective of review is to provide a retrospective study of natural colors for fibers based on their therapeutic potential. For the preparation of this manuscript, all the relevant information was gathered from accessible and

ISSN 0975-234X (Print)
0975-4377 (Online)
DOI:

Vol. 14 | Issue-04|
October - December| 2022

Available online at
www.anvpublication.org

Research Journal of Pharmaceutical Dosage Forms and Technology
Home page www.rjpdft.com

REVIEW ARTICLE

Application of Berberine on Skin Diseases: A Review

Keshav Dhiman[1], Anshul Sharma[1], Anshul Sharma[1], Kamya Goyal[2], Vinay Pandit[1], M. S. Ashawat[1], Shammy Jindal[1]*

[1]Department of Pharmaceutics, Laureate Institute of Pharmacy, Kathog Jawalaji Dist - Kangra (H.P.) India.
[2]Department of Pharmaceutical Analysis and Quality Assurance, Laureate Institute of Pharmacy, Kathog Jawalaji Dist - Kangra (H.P.) India.
*Corresponding Author E-mail: Shammyjindal@gmail.com

ABSTRACT:
The plants containing berberine have been used for the treatment of skin diseases, inflammatory disorders, and reducing fevers, wound healing, digestive and respiratory diseases and in treatment of tumors. By taking the specific properties of the berberine, this review describes the method mentioned in the literature regarding the berberine extraction. Furthermore, many experimental and clinical studies suggest that berberine has several pharmacological activities such as antioxidative, cardioprotective, nephroprotective, and hepatoprotective effect. This review summarizes the information about botanical occurrence, traditional uses and pharmacological effects of berberine and berberine containing plants.

KEYWORDS: Berberine, Skin Diseases, Psoriasis.

INTRODUCTION:

Berberine (5, 6-dihydro-9,10-dimethoxybenzo[g]-1,3-benzodioxolo[5,6-a]quinolizinium){Fig.1} is a quaternary benzylisoquinoline alkaloid. It is a very important natural alkaloid for the synthesis of several bioactive derivatives by means of modification, condensation and substitution of functional groups in strategic positions for the design of new, selective, and powerful drugs.[1]

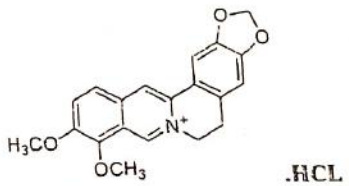

Figure: 1. Structure of Berberine

Traditional Use of Berberine containing Species:

In the Berberidaceae family, the genus Berberis comprises of 450–500 species, which represent the main natural source of berberine. Plants of this genus are used against the inflammation, diabetes, infectious disease, constipation, and other pathologies.[2] In Ayurveda, Berberis species have been used for the treatment of a wide range of infections of the ear, eye, and mouth, for quick healing of wounds, treatment of uterine and vaginal disorders. Berberine has also been used to reduce obesity, and as an antidote for the treatment of scorpion sting or snakebite.[3]

(Home.aspx)

Research Journal of Pharmaceutical Dosage Forms and Technology

(Home.aspx)

ISSN

0975-4377 (Online)

0975-234X (Print)

A Detailed Review on Fast Dissolving Niosomal Films for Sublingual Drug Delivery (AbstractView.aspx?PID=2022-14-2-11)

Author(s): Neha Sharma (search.aspx?key=Neha Sharma), Tarun Kumar Sharma (search.aspx?key=Tarun Kumar Sharma), Archana Chaudhary (search.aspx?key=Archana Chaudhary), Vinay Pandit (search.aspx?key=Vinay Pandit), M. S. Ashawat (search.aspx?key=M. S. Ashawat)

Email(s): imnehavk@gmail.com (mailto:imnehavk@gmail.com)

DOI: 10.52711/0975-4377.2022.00026 (https://doi.org/10.52711/0975-4377.2022.00026)

Address: Neha Sharma*, Tarun Kumar Sharma, Archana Chaudhary, Vinay Pandit, M. S. Ashawat
Department of Pharmaceutics, Laureate Institute of Pharmacy, Kathog, Jawalamukhi, Kangra (H.P.) 177101, India.
*Corresponding Author

Published In: Volume - 14, Issue - 2, Year - 2022 (Issues.aspx?VID=14&IID=2)

Keywords: Fast-dissolving drug-delivery () Geriatric () Solvent casting () Pediatric () Bioavailability. ()

Cite this article:
Neha Sharma, Tarun Kumar Sharma, Archana Chaudhary, Vinay Pandit, M. S. Ashawat. A